DTU Mechanical Engineering

DTU Mechanical Engineering Department of Mechanical Engineerin

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Photos Maiken Kestner, WSSA, Christian Hoflehner, Mikael Hjuler, Joachim Rode, Julie Malmstrøm, Mogens Hvid, Lisbeth Lassen, DFD, Mikal Schlosser. **Finances** Income



Research and education subsidies (government funding)







External national private grants

DKK 233 million



External international private grants



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Education Completed Bachelor projects, Masters projects and PhD theses 2018

Courses and full-time study equivalents







Education in figures 2018

Number of course units

STÅ production (full-time study equivalents)

STÅ per faculty

Course units per faculty

Research in figures



Scientific articles in WoS-indexed journals





Scientific contributions to conferences



Citation impact





Publications with industrial partners



No. of PhD theses



No. of Doctoral theses



Selected awards and distinctions

Researchers and students at DTU Mechanical Engineering were acknowledged for their contributions during 2018. Below you see a selection of these.



Innovation Fund Denmark honours talented researcher

Sara Shafiee wins the Innovation Fund Denmark's Industrial Researcher prize 2018 for the high standards of research in her industrial PhD conducted in collaboration with Haldor Topsoe.



Professor Rajan Ambat appointed Honorary Professor of Amity University

Professor Rajan Ambat from DTU Mechanical Engineering, Section of Materials and Surface Engineering, has been awarded an Honorary Professorship of Amity University, India, in recognition of his research activities in the area of climatic reliability of electronics devices and materials.



International Institute of Welding Kenneth **Easterling Best Paper Award**

Mohamad Bayat, Sankhya Mohanty and Jesper Hattel received the IIW (International Institute of Welding) Kenneth Easterling Best Paper Award at the "12th International Seminar on Numerical Weldability" for their paper entitled "Multi-scale multiphysics simulation of metal L-PBF AM process and subsequent mechanical analysis".



Silver Medal of Haandværkerforeningen The prestigious Silver Medal of Haandværkerforeningen was awarded Magnus Bech Schouw, precision mechanic at the prototype workshop of DTU.



Best paper of the Conference on Rotordynamics Magnetic Bearings for Non-Static Flywheel Energy Storage Systems by Nikolaj Dagnæs-Hansen and Ilmar F. Santos is awarded best paper of the Conference on Rotordynamics.

Doctoral dissertation

In his doctoral dissertation, Brian Nyvang Legarth has studied the non-linear mechanics of anisotropic materials- failure and homogenisation.



DTU Roadrunners win two prizes at Shell Eco-Marathon

DTU Roadrunners were best in the competitions of fuel economy and autonomous challenge.



EnergyLab Nordhavn awarded with the Danish Energi & Miljø-prisen 2018

EnergyLab Nordhavn accolated for its innovative approach to developing the future intelligent and integrated energy system.



Best presentation and young author awards Postdoc Bo Wang and PhD Yichen Meng were awarded on the 25th Congress of the International Federation of Heat Treatment and Surface Engineering (IFHTSE).

Selected grants and activities

A large number of project applications were granted during 2018. A selection of grants and specific activities is presented below.



New solution to prevent expensive damages of wind turbines

Innovation Fund Denmark invests 18 million DKK in the project WhiteWind: White Etching Crack bearing failures in wind turbines. The project's specific goal is to develop a new resistant bearing material for gearboxes, main shafts and generators, using new surface technology solutions. WhiteWind is developed in collaboration with DTU Wind Energy.



Digital 3D metal printing opens up new world for industry

Innovation Fund Denmark invests in a new research project which will give Danish industry access to knowledge and know-how about the production of 3D metal printing.



Elforsk funds project of electrifying industrial processes

Ambitious research project aiming to find electric solutions to replace heat treatment in, for instance, the food industry and in laundries. The next step is a national strategy.





Girl's Day in Science

Girls from the graduating classes of primary school were invited to an afternoon at the university with presentations of the studies and future job possibilities.



ERC Advanced Grant

Professor Dorte Juul Jensen has been awarded a ERC Advanced Grant to develop a laboratory instrument which will make it possible to analyse structures of metals in four dimensions.





New Circular Economy tool for Danish companies Researchers at DTU have developed a new digital tool that can help manufacturing companies in their transition to a circular economy.



ERC Starting Grant

Clara Velte has been awarded an ERC Starting Grants for promising early-career scientists by the European Research Council. She will use the funding to develop her existing ideas for a new physical theory of turbulence, which needs substantiating with data.



3D print of Soft Materials

Independent Research Fund Denmark has funded a project which aim is to achieve a better understanding of the behaviour of plast molecules in 3D printed workpieces.