

[www.sdu.dk/mmmi](http://www.sdu.dk/mmmi)

## THE MAERSK MC-KINNEY MOLLER INSTITUTE



# International Master's Degree in Robots Systems Engineering/Modern Artificial Intelligence

This 2-year international programme aims at providing you with competences that will enable you to incorporate advanced artificial intelligence in robots, enabling them to behave intelligently and autonomously.

Well-qualified students, who have completed a bachelor's degree in electronics, mechanical or software engineering (or a closely related discipline), are invited to carry out two years of study for the degree of MSc in Modern Artificial Intelligence at The Maersk Mc-Kinney Moller Institute, Faculty of Engineering, University of Southern Denmark.

### *Contents of the Programme*

The first three semesters of the programme consist of course work, where students follow courses in classical, behaviour-based, and embodied artificial intelligence, covering topics such as search, neural networks, genetic algorithms, machine learning, and adaptive robots; in a final course the students are introduced to the research areas of modular robotics and biomimetic robots. The theoretical material taught in these courses will be tried out on real robots in hands-on projects. The study programme is supplemented with elective courses in industrial robot control and software engineering.

The fourth semester of the programme is spent on work aimed at the Master's thesis. The choice of thesis topic is open, but common topics are often related to modular or biomimetic robots, our two main areas of research.

The degree, with its unique combination of theoretical work in artificial intelligence and hands-on work with robots, qualifies graduates for employment in industry or further study towards the degree of PhD.

### *Research Group*

Among its many international research achievements, the Artificial Intelligence Group won the International Conference on Robotics and Automation's Contingency Challenge 2010, and was awarded "coolest robot" in the challenge held in 2008.

The group has developed many types of robots from wheeled robots to fish and lizard robots. We have also developed novel artificial intelligence-based control algorithms for these robots and much, much more. Come and see for yourself!

