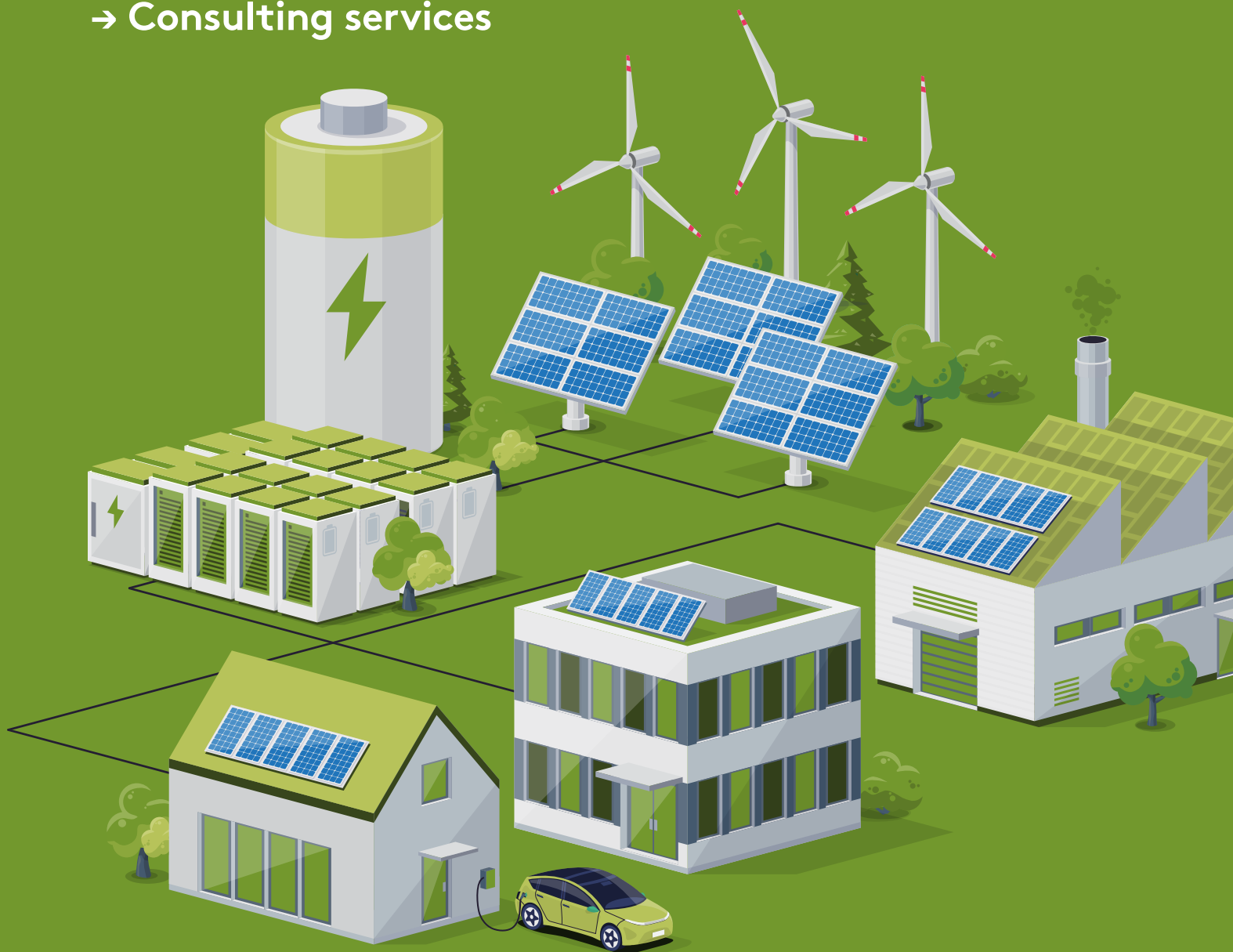


# CENTRE FOR INDUSTRIAL ELECTRONICS

- Education
- Research
- Consulting services

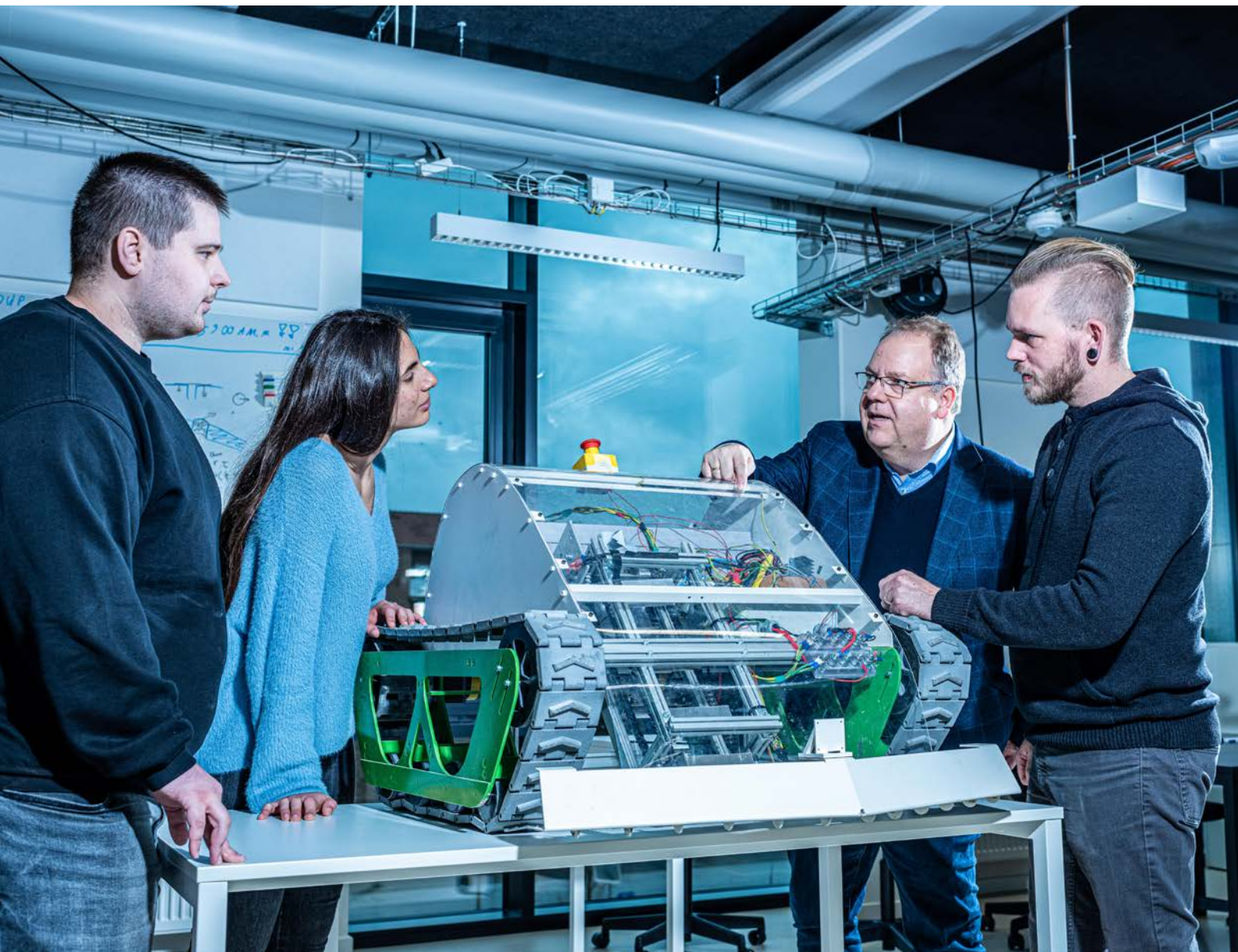


The Centre for Industrial Electronics (CIE) at the University of Southern Denmark is an international hub for excellent research, technology development and application. The Centre offers cooperation to partners from academia and industry contributing with advanced technologies, competences and world-class research facilities.

CIE has a strong mission to advance electrification, digitalization and energy efficiency by bridging applied research, sustainable technology development and innovation. A strong focus is placed on the development of next-generation electronics, such as active and passive components, power electronic components, EMC and intelligent systems.

CIE is a global partner in research and development in close cooperation with academic and industrial partners. Through our research, we deliver knowledge in key technology areas that strengthen each other.

The overall goal of our research is to help companies and society transform towards electrification, digitalization, renewable energy supply and energy efficiency. In doing so, we create a unique influence on technology management and innovation of our industrial partners and customers.





**KNOW  
HOW  
CREATES**

## **OJ Electronics makes Electric Floor Heating and Ventilation Systems Intelligent** – and contributes to a better climate

We design and develop electronic controls for electric floor heating as well as controls & drives for ventilation systems.

Our passionate and committed employees have given us a position as the world's leading manufacturer in our markets. We offer in-depth know-how within specialized controls and drive solutions for ventilation and thermostats.

For more than 50 years, we have focused on developing and producing the highest quality. We highly value functionality, reliability and intuitive user experience. Our solutions do not just optimise the indoor climate.

We create solutions that reduce energy consumption and thereby contribute to reducing the climate footprint of buildings worldwide.

### **Know-how creates**

Know-how creates new opportunities - new ways of solving genuine needs. When we innovate, our know-how creates true value for our customers.

At OJ Electronics, innovation is more than just product development. It is a passion for finding creative new ways of meeting specific needs. Our company is based on the know-how that lies within our employees. Every single one of them. They are the core of our company, which consists of more than 180 passionate professionals who work on improving human comfort and physical environment through electronic solutions.



**Scan and see  
our video**

[www.ojelectronics.com/career](http://www.ojelectronics.com/career)





# Study Electrical Engineering at the University of Southern Denmark

The University of Southern Denmark offers a variety of Engineering programmes in English. You learn in small classes and enjoy a professional yet informal student-teacher relationship. You study in teams and carry out projects in collaboration with Danish industry, which will increase your chances to get a job in Denmark.

## SDU Sønderborgs Electronics Engineering programmes

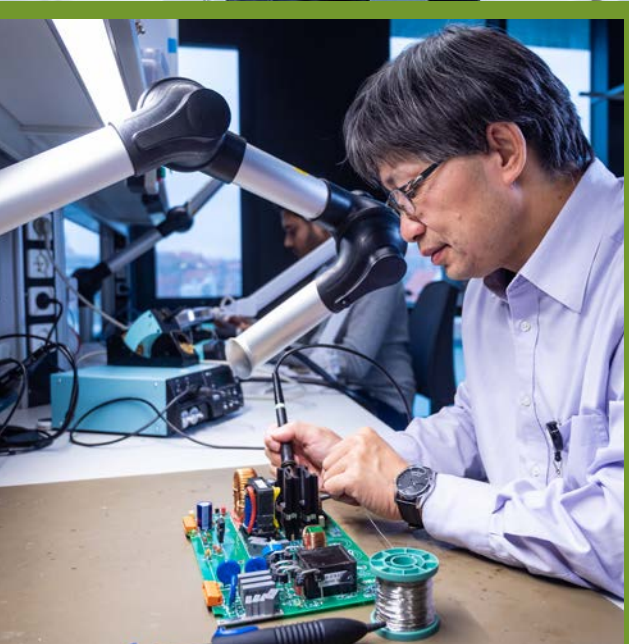
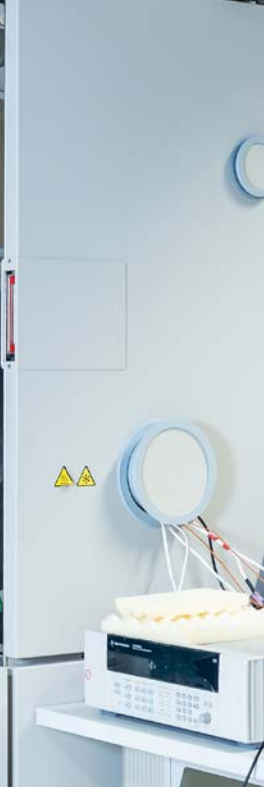
- BEng in Electronics
- BSc in Electronics Engineering
- MSc in Electronics

## Your study programme in Sønderborg

- Taught in english
- Competences for global markets
- Projects with companies
- More than 50 % international students
- Scandinavian lifestyle
- First job guarantee







The Centre for Industrial Electronics conducts research in the following focus areas:

- Passive components
- Power converters and systems
- Control
- Intelligent systems
- EMC - electromagnetic compatibility
- Reliability
- Acoustics in production
- Wide Bandgap (WBG) Semiconductors like SiC and GaN
- PV system characterization and optimization
- Control and protection in smart grids (CAP-SG)



# Consultancy

CIE offers consultancy services for industrial partners, contributing with advanced technologies, competences and world-class research facilities.

Companies benefit from the following technology areas and state-of-the-art labs:

## Technology areas

- Acoustics in production
- EMC
- Intelligent systems
- Motors and control
- Passive components
- Power converters and systems

## Labs

- Acoustics lab
- Capacitor lab
- Chemical lab
- EMC lab
- Linear actuator lab
- Motor test lab



## TAKING THE NOISE OUT OF **E-MOBILITY**



**WÜRTH  
ELEKTRONIK**  
MORE THAN  
YOU EXPECT

### Noise-free e-mobility

E-mobility is no longer a question of tomorrow, and the number of e-vehicles is increasing day by day. Handling EMI noise is becoming more and more crucial when it comes to designing new electronic devices and systems. Würth Elektronik offers a wide range of EMC components, which support the best possible EMI suppression for all kinds of e-mobility applications. With an outstanding design-in support, catalogue products ex stock and samples free of charge, the time to market can be accelerated significantly. Besides ferrites for assembly into cables or harnesses, Würth Elektronik offers many PCB mounted ferrites and common mode chokes as well as EMI shielding products.

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- Large portfolio of EMC components
- Design-in-support
- Samples free of charge
- Orders below MOQ
- Design kits with lifelong free refill

#EMCFOREMOBILITY

# EMC – electromagnetic compatibility

An example of our current research is the work on electromagnetic compatibility. We have a strong interest in all forms of EMC and are particularly strong in conducted emission (<30 MHz) and EMI filtering, including use of hybrid magnet. Another area of focus within the research field is predicting EMC properties early in a project based on the used modules and EMC architecture. We are among the pioneers in using near-field scanning for hotspot search and use the measured field as a source for simulations and EMC architecture.

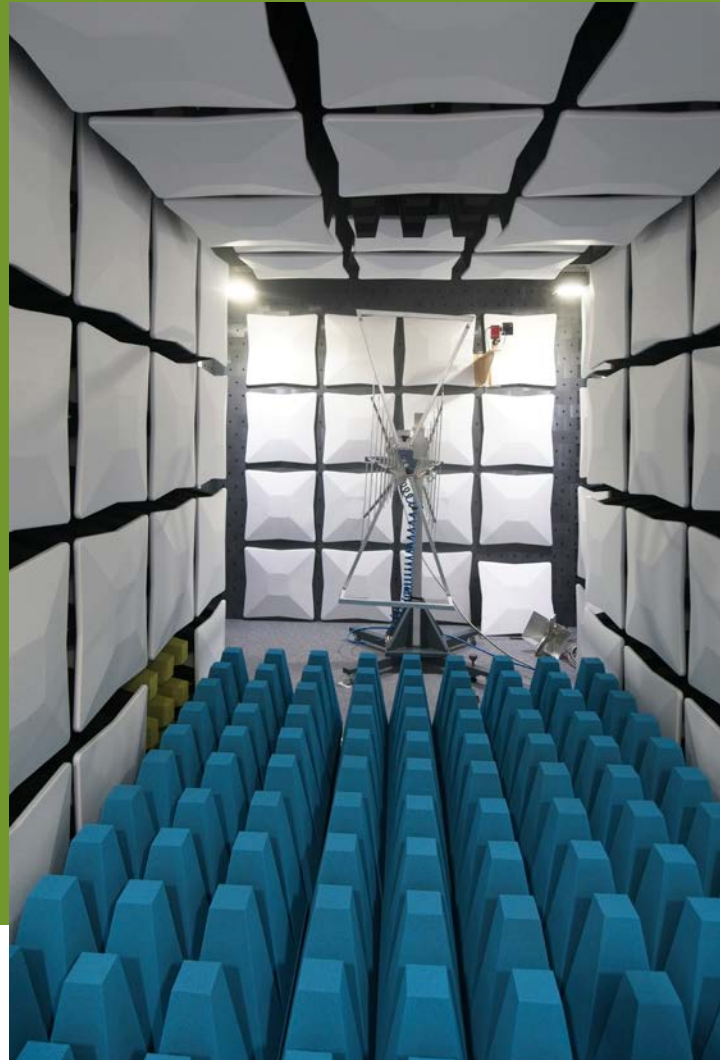
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## Advanced power electronic components from Miba

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Miba develops and produces functionally critical components along the entire energy value chain. Our products make an important contribution to the efficient and sustainable generation, transmission, storage and use of energy.

As a leading international manufacturer of high

power, high voltage and customized resistors, as well as high-performance heat sinks for power semiconductors, we develop the optimal solution for our customers.

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ENGINEERING  
TOMORROW

*Danfoss*