

## Press Release

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### Jochen Cremer appointed Principal Scientist at the AIT Center for Energy

Jochen Cremer conducts research at AIT Austrian Institute of Technology and TU Delft on using artificial intelligence and machine learning to develop innovative planning and operating methods in the energy system.

Jochen Cremer (33) has been appointed Principal Scientist in the Center for Energy at the AIT Austrian Institute of Technology as of 26 September 2023. In this position, he is responsible for the scientific management and international cooperation of an ambitious interdisciplinary research programme run by AIT and TU Delft. The focus of this five-year PhD Programme is on using artificial intelligence and machine learning to develop new methods for planning and operating future energy systems. Jochen Cremer has been Co-Director of the TU Delft AI Energy Lab for three years and is an Assistant Professor at the Faculty of Electrical Engineering, Mathematics and Computer Science at TU Delft.

#### **Andreas Kugi, Scientific Director of the AIT Austrian Institute of Technology:**

"The AIT Principal Scientist Programme involves internationally outstanding researchers in the realisation of pioneering flagship projects at AIT. I am particularly pleased that we have been able to recruit Jochen Cremer as a Principal Scientist for this interdisciplinary field of energy research", says Andreas Kugi, Scientific Director of the AIT Austrian Institute of Technology.

#### **Wolfgang Hribernik, Head of the Center for Energy of the AIT Austrian Institute of Technology:**

"The complexity of the future energy system will continue to increase sharply due to new technologies, political developments and market mechanisms, presenting us with new technical challenges. With Jochen Cremer as Principal Scientist, we have succeeded in attracting an internationally recognised expert in the use of artificial intelligence and machine learning in the future energy system. I am very much looking forward to working with him and the continued strategic development of this research area, which promises groundbreaking planning and operating methods," says Wolfgang Hribernik, Head of the Center for Energy.

#### **Jochen Cremer, Principal Scientist at the Center for Energy of the AIT Austrian Institute of Technology:**

"A sustainable energy system requires new applications, such as the prediction of flexibility in the power grid and electricity price developments, or the self-learning optimisation of electric vehicle charging management. For the first time, our research programme covers different aspects of energy system integration using artificial intelligence and data-centric methods. In my new role as Principal Scientist at AIT, I am very much looking forward to high-impact research projects where we will develop new methods for the energy system of the future, such as an improved

fundamental understanding of market prices, more accurate energy forecasts and the development of innovative tools for energy system management," says Jochen Cremer, Principal Scientist at the AIT Center for Energy, Co-Director of the TU Delft AI Energy Lab and Assistant Professor at the Faculty of Electrical Engineering, Mathematics and Computer Science at TU Delft.

### Artificial intelligence and machine learning for further digitalisation of the energy system

The joint five-year doctoral programme (PhD programme) of the AIT Austrian Institute of Technology and TU Delft under the direction of Jochen Cremer was launched in the winter semester 2022/23. The research programme aims to address the pressing challenges of integrating mobility, heat and electrical energy systems with the help of digitalisation and AI-based tools. The aim is to use big data to improve the efficiency, sustainability and safety of energy systems. The programme brings together expertise from integrated energy systems and applied AI research. It revolves around six contexts, including modelling the impact of electric vehicles, optimising energy markets and reconfiguring grid topologies. The research programme aims to provide insights into AI challenges and data integration and to develop methods for a data platform for power system planning and operation.

### Career details

Jochen Cremer studied electrical and mechanical engineering in parallel at the Rheinisch-Westfälische Technische Hochschule (RWTH) in Aachen, with time spent abroad studying for his master's thesis at the Massachusetts Institute of Technology (MIT), and for his doctoral thesis at Imperial College London. Since completing his PhD in 2020, he has been Co-Director of the TU Delft AI Energy Lab and Assistant Professor at the Faculty of Electrical Engineering, Mathematics and Computer Science at TU Delft. In 2021, he was awarded the Eryl Cadwallader Davies Prize for electrical engineering by Imperial College London in the category "Outstanding PhD Thesis". In 2022, he received a Veni award from the Netherlands Research Council NWO for his academic achievements in the applied and technical research category.

### AIT Principal Scientist Programme

Principal Scientists play a prominent role in AIT's scientific career model. They are internationally recognised experts with outstanding scientific careers who significantly influence the strategy of their research areas. They focus on establishing, strengthening and networking AIT's core scientific competencies. As a strong and visible hub in international scientific networks, they are initiators of the strategic development of research collaborations with universities, other research institutions and companies, and contribute to shaping national, international and European R&D.

### AIT Center for Energy

At the AIT Center for Energy, around 270 employees are working on solutions for the sustainable energy supply of tomorrow under the leadership of Wolfgang Hribernik. AIT experts with their many years of experience and scientific excellence, paired with high-quality laboratory infrastructure and global networking, offer companies innovative and applied research services to give them a clear competitive advantage in this future market. The Center for Energy's portfolio of topics is oriented towards three central systems: sustainable public energy supply; decarbonisation of industrial processes and plants; and innovative technologies and solutions for urban resilience (buildings, cities).

Further information about the Center: <https://www.ait.ac.at/energy>

Press photo:



BU: Jochen Cremer appointed Principal Scientist at the AIT Center for Energy.  
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