Press Release

Vienna, 03/06/2024

AIT PRESENTS INNOVATIVE SOLUTIONS FOR POWER ELECTRONICS AND SMART GRIDS AT PCIM 2024 IN NUREMBERG

The AIT Austrian Institute of Technology will be presenting pioneering developments and services in the fields of power electronics and smart grids at PCIM in Nuremberg, which will take place from 11 to 13 June 2024.

Austria's largest non-university research organisation, the AIT Austrian Institute of Technology, will once again be present at this year's PCIM, the world's leading trade fair and conference for power electronics, intelligent drive technology, renewable energies and energy management.

PCIM will take place from 11 June to 13 June 2024 in Nuremberg. The AIT Austrian Institute of Technology will be present **at stand 407 in hall 7** and will provide insights into its latest research results and developments in the field of power electronics and energy efficiency, including innovative approaches to the integration of renewable energies.

"Advances in power electronics are of crucial importance for the transformation of our energy systems. They enable flexible and efficient control of energy conversion processes and make a significant contribution to the integration of renewable energies. AIT is a pioneer in the development of innovative solutions based on the latest technologies. Our many years of experience and in-depth expertise are recognised worldwide," says Dr Wolfgang Hribernik, Head of the Center for Energy at AIT.

Dr Christian Chimani, Head of Center for Transport Technologies: "We are researching solutions for sustainable, safe, intelligent and therefore future-proof mobility. The PCIM offers us an ideal opportunity to showcase our latest developments and research results in the field of highly efficient power electronics for electromobility."

Visitors to PCIM are cordially invited to visit the AIT stand in **Hall 7, Stand 407**
to visit.

We will be presenting our current research projects and development services in the field of power electronics/smart grids

- Hardware in the loop simulations for grid-connected power electronics (grid forming modes / grid support modes / off-grid application)
- Medusa Dual Active Bridge for Multi Mega Watt Charging of E-Trucks
- Highly efficient silicon carbide-based inverters
- Gallium nitride (GaN) prototypes for the next generation of powertrains in electric vehicles

Highly efficient power electronics with innovative semiconductor materials
AIT is working intensively on the development and optimisation of power electronics for electromobility and electrical energy supply. Using advanced semiconductor materials such as silicon carbide (SiC) and gallium nitride (GaN), components with maximum efficiency and power density are being developed, resulting in lower costs. This also includes the development of innovative control algorithms in the software.

The AIT Centre for Transport Technologies is focusing on traction inverters, on-board chargers and DC/DC converters. These have a significant impact on efficiency in battery electric and hydrogen-powered vehicles, but can also contribute to cost savings. The research group's expertise ranges from design to vehicle integration and commissioning.
https://www.ait.ac.at/loesungen/e-mobility

The AIT Centre for Energy focuses on energy conversion for renewable energies, hydrogen systems and megawatt charging infrastructure. The researchers develop powerful and efficient power electronics solutions for the energy transition, utilising new semiconductor technologies such as GaN and SiC with high dielectric strength, which facilitate direct connection to medium-voltage grids. With a comprehensive range of test benches and model-based development methods, AIT offers added value in the design and testing of energy system components.
https://www.ait.ac.at/loesungen/power-system-technologies-development-validation

AIT Austrian Institute of Technology GmbH

The AIT Austrian Institute of Technology is Austria's largest Research and Technology Organisation (RTO) and plays in the top league worldwide in many infrastructure topics. With its seven centres, the AIT deals with the central infrastructure topics of the future and sees itself as a highly specialised research and development partner for industry. AIT's research and technological developments are realising fundamental innovations for the next generation of infrastructure technologies in the fields of Energy, Transport Technologies, Health & Bioresources, Digital Safety & Security, Vision, Automation & Control and Technology Experience. These scientific research areas are complemented by expertise in the field of Innovation Systems & Policy.
As a national and international hub at the interface between science and industry, the AIT makes a name for itself as a centre of excellence thanks to its scientific and technological expertise, experience in

The company is able to innovate thanks to its strong market position, close customer relationships and an outstanding research infrastructure.

Enquiry note

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