EPFL STI IMT-NE PV-LAB

Seminar

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MT 2 11.00

Rue A.-L. Breguet 2, CH-2000 Neuchâtel

Trends in PV Inverter

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ABSTRACT

In the last two decades, the losses of most efficient PV inverters on the market were reduced by a factor of nearly ten. Today's word record inverters reach 99% efficiency using the transformerless topologies, for which the development was started about two decades ago. Further improvements of efficiency by using GaN of SiC power semiconductors still have to be proven by economy. The share of costs and the most relevant components in terms of losses are discussed. Bringing more PV power electronics closer to the solar cell, like module oriented power electronic devices to reduce partial shading losses in the PV systems are critically discussed and could emerge as a mainstream technology.