

## **GaN for Advanced Power Applications: the future of power electronics**

Relatore:

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GaN4AP project has the challenging goal of making GaN-based electronics become the main technology for active devices in all power conversion systems. A pervasive usage of GaN electronics will allow the possibility of developing close-to-zero energy loss power electronic systems. In summary, the GaN4AP project has the following ambitious targets:

1. Development of innovative Power Electronic Systems that can achieve the requested 99% power conversion efficiency for power conversion with state of the art GaN-based devices.
2. Development of an innovative material and of a new generation of vertical power GaN-based devices for a ultra high speed and power circuits.
3. Development of a new intelligent and integrated GaN solutions that will allow the design of novel E-Mobility power converters.

In my presentation I will briefly present more in details the above mentioned activities.