

**Plenary Talk**

PV II Tue 9:00 Audimax

**Advances in laser plasma accelerators and their future prospect** — ●WIM LEEMANS — DESY Hamburg, Deutschland

Laser-powered, plasma-based accelerators make electrons surf on waves and can reach multi-GeV energy levels in a few 10\*<sup>s</sup> of cm that, if one relies on conventional methods, would require machines multiple foot-

ball fields long. Although many challenges remain, this new technology is at the brink of offering a profoundly different way in which we may build particle accelerators. An overview of the latest progress and the next steps in the R&D needed to advance this technology will be presented. Applications such as generation of intense radiation, injection into storage rings, future colliders or medical therapy will be discussed.