



# Berliner Physikalisches Kolloquium

im Magnus-Haus, Am Kupfergraben 7, 10117 Berlin

Eine gemeinsame Veranstaltung der Physikalischen Gesellschaft zu Berlin e.V.,  
der Freien Universität Berlin, der Humboldt-Universität zu Berlin,  
der Technischen Universität Berlin und der Universität Potsdam  
– gefördert durch die Wilhelm und Else Heraeus-Stiftung –

Am Donnerstag, dem **8. Oktober 2020**, um **18:30 Uhr**

spricht

**Prof. Dr. Wim Leemans**  
**Deutsches-Elektronen Synchrotron DESY**  
**und Universität Hamburg**

über das Thema

**„An overview of advances in laser plasma accelerators  
and their future prospect“**

Moderation: Andreas Jankowiak, Helmholtz-Zentrum Berlin für Materialien  
und Energie und Humboldt-Universität zu Berlin

Laser powered plasma based accelerators, where electrons surf on plasma waves, can now reach multi-GeV energy levels in a few tens of cm. In contrast, relying on conventional methods to reach such energy levels would require machines that are multiple football fields long. Although many challenges remain to reach high power beams with exquisite quality and high reliability, 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 and medical therapy will be discussed.