



ΑΡΙΣΤΟΤΕΛΕΙΟ
ΠΑΝΕΠΙΣΤΗΜΙΟ
ΘΕΣΣΑΛΟΝΙΚΗΣ

ΣΕΜΙΝΑΡΙΟ ΤΜΗΜΑ ΦΥΣΙΚΗΣ

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Αίθουσα Γενικών Συνελεύσεων

4^{ος} όροφος, Αίθουσα 26

Κύκλος σεμιναρίων



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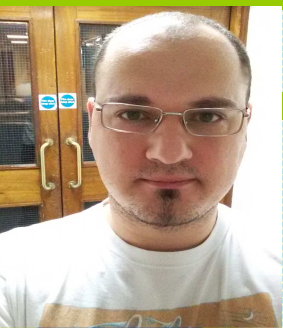
Ionisation induced electron trapping in the linear regime of a laser wakefield accelerator



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The scheme of Laser Wakefield electron acceleration (LWFA) has rapidly matured over the past decade, from proof-of-principle experiments to real life applications, such as non-destructive X-ray imaging. The scheme involves the use of >1 TW laser systems and > 1mm long gaseous targets. In this seminar, we will describe the basic principles of LWFA, show how ionisation injection relaxes the laser requirements to achieve stable relativistic electron beams and outline the potential of these ultra-compact relativistic accelerators.

Το προφίλ του ομιλητή



Dr. Christos Kamperidis holds a B.Sc. in Physics from the Aristotle University of Thessaloniki, an M.Sc. in Laser Physics from the Technical University of Crete, Greece and a Ph.D. in Laser - Plasma Physics from Imperial College London, UK (EPSRC funded). Since 2008 he had post-doctoral and adjunct Assistant Professor positions at the Atomic Physics Division Lund University, Sweden and TEI of Crete, Greece. Currently, he works at the John Adams Institute, Imperial College London, UK, where he holds an Intra-European Marie Curie Fellowship. His main research activities are Laser Wakefield Acceleration and High Harmonic Generation in gases, while he is actively involved in the operation and maintenance of multi-TW (multi-pass Ti:Sapphire) and ultra-short (<10 fs, OPCPA) laser systems.