

Abstract:

Linear Electrical Machines have been widely used for many applications, ranging from transportation vehicles including high speed Maglev train, low-speed Maglev train and Linear Metro, to the industry applications of machine tools, rope-less lifter, conveyers, etc. The main researches focus on optimal design, new technologies and new applications. This keynote speech systematically overviews the recent developments in innovative linear machines. The emphasis will focus on the structure topology, optimal design and application of various linear machines, mainly including (1) linear induction machine; (2) linear PM machines; (3) linear oscillatory motor. Many research examples will be illustrated.