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Nota di contenuto	Introduction -- Mathematical modelling of surface-mount linear permanent magnet synchronous motor -- Direct thrust control based on advanced duty ratio control schemes -- SV-PWM based direct thrust control schemes -- Optimal, combined speed and direct thrust force control -- Sliding mode based combined speed and direct thrust force control -- Sensorless control of a linear permanent magnet synchronous motors using a combined sliding mode adaptive observer -- Conclusions.
Sommario/riassunto	This book explores the direct thrust force control (DTFC) of tubular surface-mount linear permanent magnet synchronous motors (linear PMSMs). It presents a detailed account and analysis of several advanced nonlinear control schemes, based on the direct thrust control principle, to achieve a reduction in steady-state ripple in thrust force with faster transient response, and describes their experimental validation. It also provides rigorous details of the dynamic modelling of linear PMSMs from a control system perspective, and demonstrates the superior

control performance of the proposed techniques compared to the current state-of-the-art techniques. Lastly, the book proposes and validates a stator flux observer for sensorless speed estimation comprising a linear state observer and an improved sliding mode component. .