

## THE DYNAMIC BEHAVIOUR OF A LOW-SPEED ELECTRO-MAGNETIC SUSPENSION

The report describes the behaviour of a small magnetically suspended vehicle. Electro-magnets pulling up to an armature rail prove unstable; thus a novel control system is devised. The suspension is designed, constructed and tested for a low-speed urban transport vehicle and the technical concepts are explored in detail. The magnets provide an adequate suspension giving an acceptable ride on average track quality, without the need for a secondary suspension.

It is shown that a ride equivalent to that of other, modern urban transport can be achieved with an air-gap of 15mm. The response of the suspension to track irregularities is also described.