



Ph.D.ICEAA

Ph.D. Program in Civil, Building Construction  
and Environmental Engineering

*Coordinator: Prof. Marcello Di Risio*

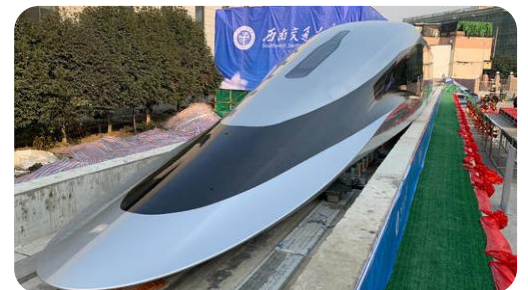
## Advances in HTS maglev for (ultra) high-speed rail transport

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### Abstract

High-temperature superconducting (HTS) maglev presents remarkable capabilities, making it particularly suitable for both the expansive terrain of China and the geographically unique layout of Italy. The University of L'Aquila and Southwest Jiaotong University have been at the forefront of HTS maglev research, fostering a strong, collaborative relationship. This presentation showcases the latest advancements in HTS maglev, emphasizing its potential for high-speed rail systems. We have successfully validated the feasibility, stability, and performance of HTS maglev systems through a series of experimental platforms, including a 400 km/h evacuated tube test setup and a 700 km/h high-speed simulation platform. Moreover, we are nearing the completion of a dynamic model test platform capable of simulating speeds up to 1500 km/h, and we have designed a high-speed engineering prototype. While HTS maglev technology offers numerous advantages, such as improved stability and efficiency, it also presents several challenges. These issues will be addressed in the presentation, offering valuable insights for the future of high-speed transportation development.



**September 12th 2024 - 15:00**

Polo Universitario di Roio –

Modalità mista: Classroom: B.012; Teams room: br2yuo6