



**POLITECNICO DI TORINO**  
Dipartimento di Georisorse e Territorio



GEORESOURCES AND ENVIRONMENT ASSOCIATION



ITALIAN TUNNELLING ASSOCIATION

**INTERNATIONAL CONGRESS**  
**MECHANIZED TUNNELLING: CHALLENGING CASE HISTORIES**

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**BOLOGNA RAIL TUNNELS**  
**(Italy)**

**Abstract**

The realization of the “lotto 5” of the High speed rail system in Bologna represents a very challenging project for the S.Ruffillo scrl Joint Venture (Necso-Salini-Ghella) due to different factors: the high urbanization of the area, the very variable ground conditions and the fact that the two 9,4 m EPB machines have to run parallel for 6,1 km below one of the main Italian railroad. This paper focuses on the EPB tunnels describing the main aspects and problematics of the excavation.