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2017

NOON TALK @ DIATI

**Mercoledì 5 APRILE 2017**  
**ore 12.00**

Politecnico di Torino  
Aula Rocce  
Piano seminterrato, DIATI ingresso 3



**POLITECNICO  
DI TORINO**

Dipartimento di Ingegneria  
dell'Ambiente, del Territorio  
e delle Infrastrutture

**Daniele Peila**  
Associate Professor at DIATI



**“Tunnelling in soil.  
Conditioning in the excavation  
with EPB machines”**

Prof. Mario Patrucco moderates the discussion

**ABSTRACT**

Tunnel numbers and lengths are growing up worldwide at an incredible rate considering both deep mountainside tunnels and urban tunnels. For tunnel construction, full face machines are most frequently used “excavation tools”, taking into account the advantages of these technologies compared with conventional tunnelling methods. Among them, EPB machines are the leading technology. For their correct use and management, it is necessary that the soils or the rock masses excavated by the cutter head are treated inside the machine to obtain a suitable muck. This action, called “conditioning”, requires a mixing process of the soil with chemical additives, mainly foam. The behaviour of this new material and the amount of conditioning agents to be used are to be assessed at the design stage and they are key parameters of the excavation process. These topics are discussed in the seminar, where after a short review of the machine types, the results of tests carried out with innovative and specially developed laboratory devices are presented and discussed.

**BIOGRAPHY**

Prof. Daniele Peila graduated cum laude as Mining Engineer at Politecnico di Torino where he became before research assistant and then professor. He presently is professor of “Tunnelling”, director of the Post-graduate Master Course on “Tunnelling and Tunnel Boring Machines” and responsible of the laboratory “Tunnelling and Underground Space” at Politecnico di Torino. He has been vice-president of International Tunnelling and Underground Space Association and, presently, acts as vice-president Italian Tunnelling Association. He is editor “Tunnelling and Underground Space Technology” and “Environmental and Mining Geo-engineering” and member many editorial of international journals. His fields of specialization are: tunnelling (conventional and mechanized), mining and rock-fall protection. In these fields he acted as person in charge of many research projects and is author of more than 250 papers published on both international journals and congress proceedings. Furthermore, he is often called upon to give worldwide lectures and seminars for events organized by International Universities as well as by cultural associations and to act as key note speaker.

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Please bring  
your own mug.  
Coffee and tea  
will be  
provided  
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Save the date for our next speaker-event, on May 3 2017, at 13:00.