

51
2019

NOON TALK @ DIATI

**Mercoledì 6 Marzo 2019
ore 13.00**

Politecnico di Torino
Sala Riunioni, primo piano,
DIATI ingresso 3

Daniele Martinelli
RTDa at DIATI

Underground space as a resource for modern cities, examples from Finland

Prof. Daniele Peila moderates the discussion

ABSTRACT

The constant growth of the population in urban areas, brought the cities to study new ways for developing their spaces. One of the most efficient solutions for modern and smart cities is to move services such as transport infrastructures, storages and industrial facilities underground, leaving residential and leisure areas on the surface. This strategy allows to expand the cities in a smart way, keeping the pleasant areas for activities related to the regular human life. In this context Finland is developing the urban areas with this philosophy, by recovering old industrial spaces which are moved underground. Some good examples are given from Helsinki, where the city centre is "truck free", as all the deliveries are carried out through service tunnels beneath the city, and from Turku, where the land just over a new wastewater treatment plant has been converted into a residential area. In addition, Finland will be the first country in the world to confine nuclear spent fuel underground in a geological repository.

BIOGRAPHY

Daniele Martinelli currently works as an Assistant Professor (RTD-A) at the Department of Environment, Land and Infrastructure Engineering of the Politecnico di Torino.

He got his PhD at the same university in Georesources and Geotechnologies in 2016 with a thesis on the mechanical behaviour of conditioned material for EPBS tunnelling.

He worked as an engineering consultant in Finland, especially concerning numerical modelling and excavation and design of hard rock masses.

He was part of the design team of the world's first permanent nuclear-waste repository in Finland, being involved in the characterization facility and the long term safety issues. He has been involved in several design studies of underground facilities with notable spans up to 40 m.

His research interests include the conditioning of soils for EPB tunnelling, the stability of mining voids and the geoenvironmental aspects and rock mechanics of hard rock masses.



**POLITECNICO
DI TORINO**

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



Follow us on:
www.diatipolito.it
Twitter: twitter.com/DIATI_PoliTo
Facebook: facebook.com/diatipolito

Save the date for our next speaker-event, on April 3 2019, at 13:00.

“
Please bring
your own mug.
Coffee and tea
will be
provided
”