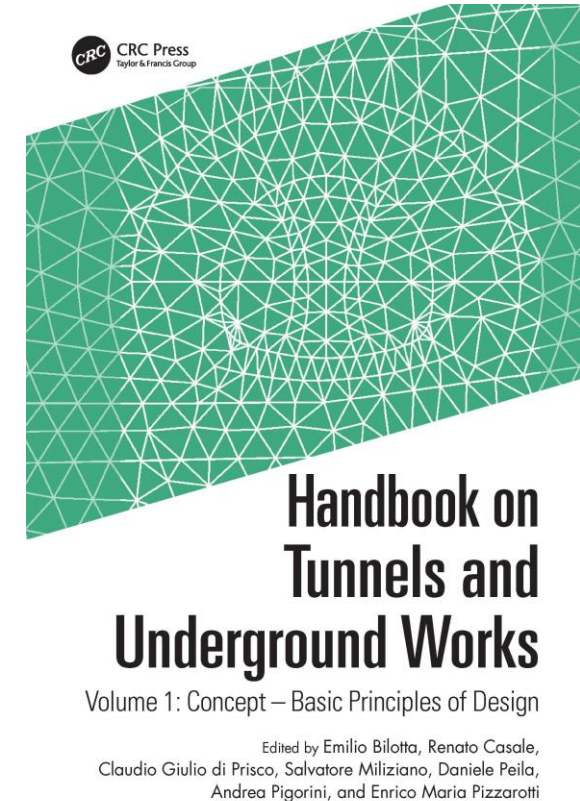


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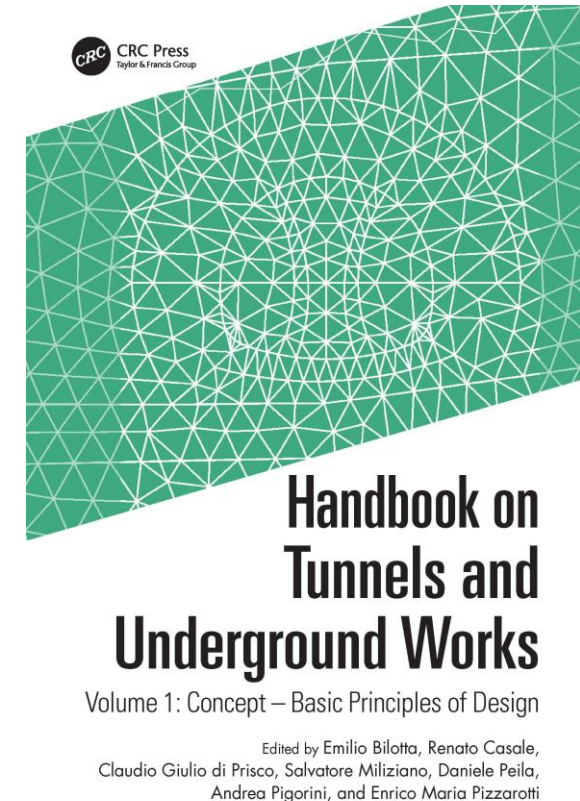


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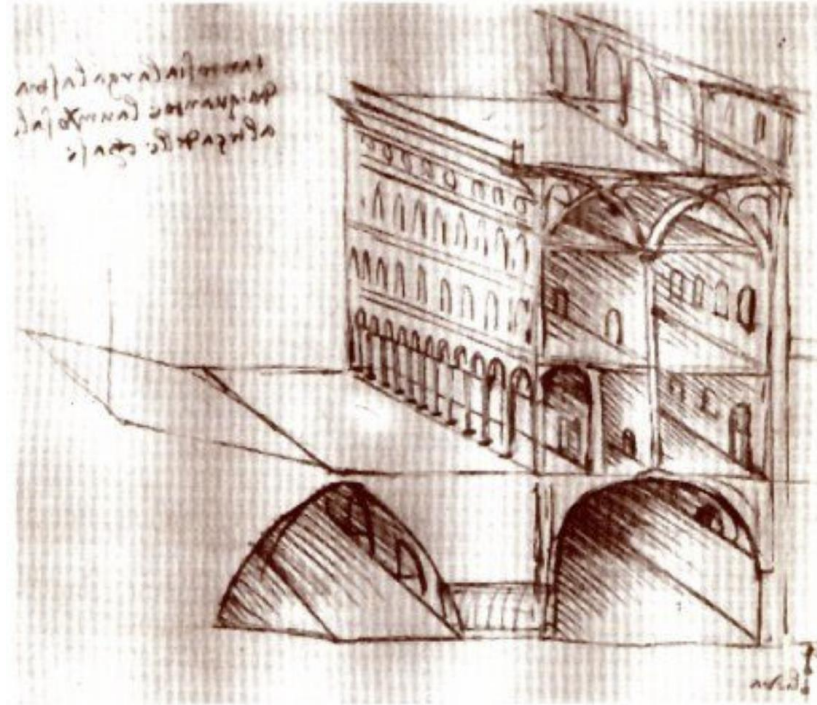
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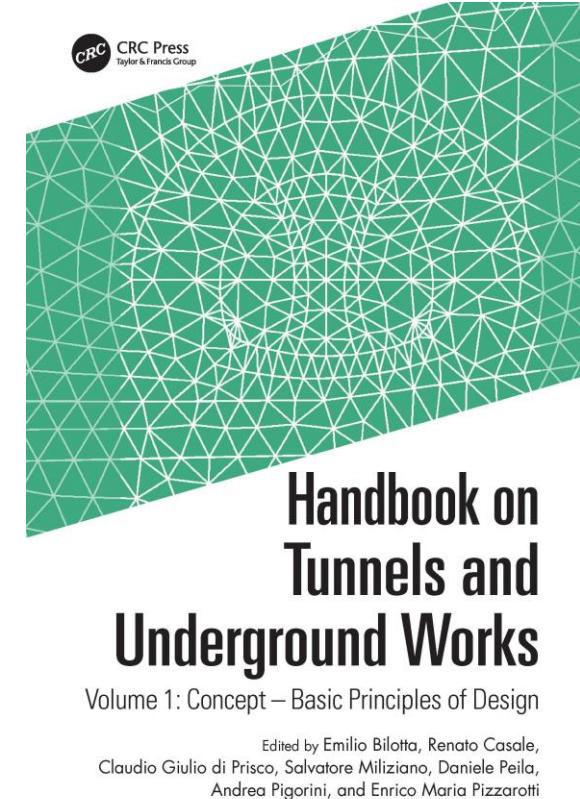
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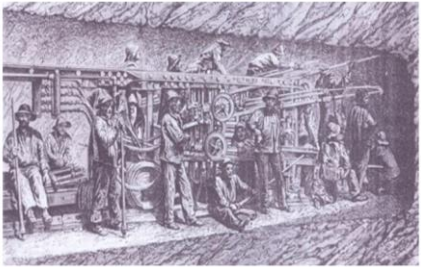


L'Italia ha una grande tradizione nelle gallerie



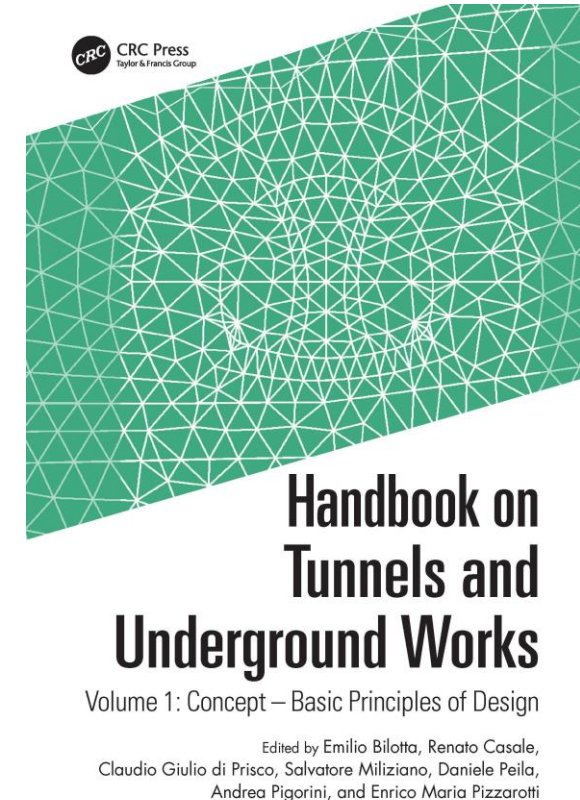
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L'evoluzione delle tecniche di scavo è stata dirompente



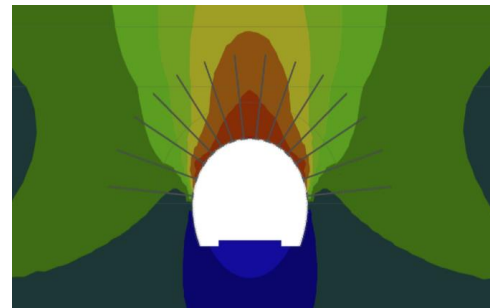
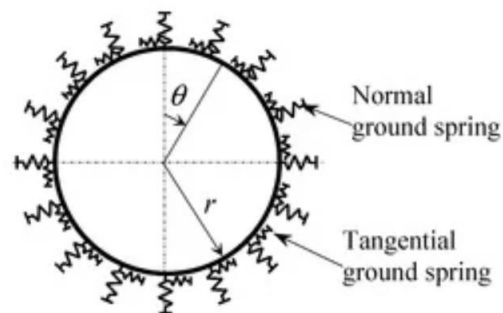
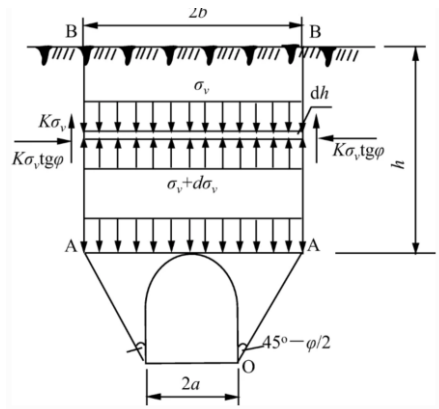
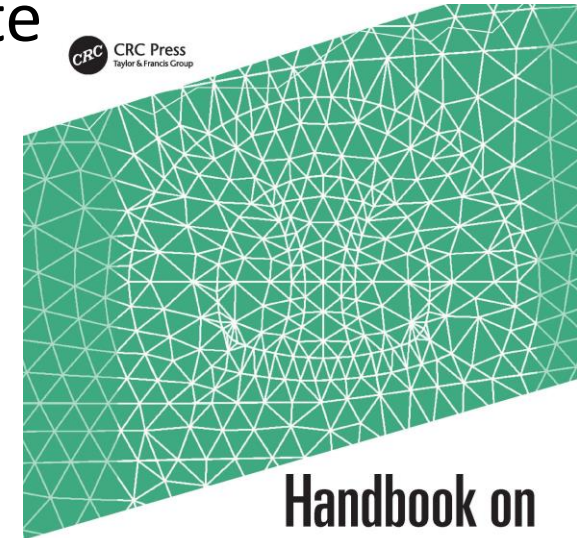
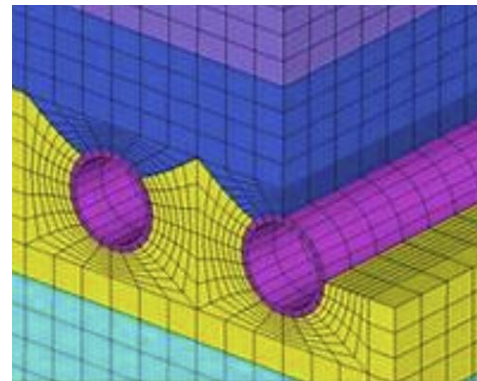
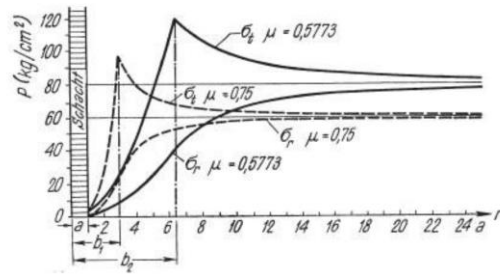
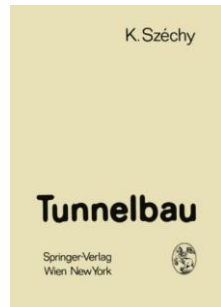
150 anni di evoluzione nello scavo di gallerie
nello stesso massiccio geologico

- (a) Il primo tunnel ferroviario del Frejus (1857–1871)
- (b) Il primo tunnel stradale del Frejus (1975–1979)
- (c) Il secondo tunnel stradale del Frejus (2011–2014)



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L'evoluzione delle tecniche di calcolo è stata dirompente



CRC Press
Taylor & Francis Group

Handbook on Tunnels and Underground Works

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Handbook on tunnels and underground works

Il quantitativo di informazioni a disposizione dei giovani studenti è cresciuto a dismisura

[Tutti](#) [Immagini](#) [Video](#) [Notizie](#)

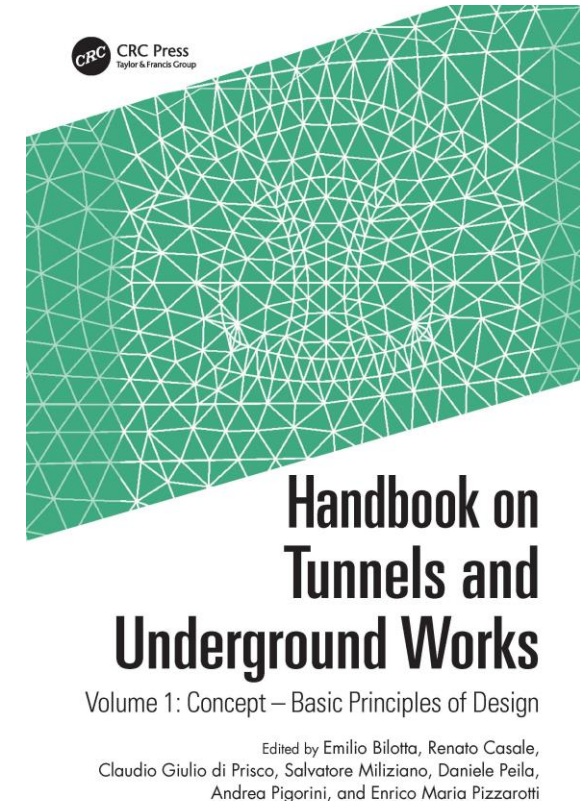
Tutti i risultati ▾

Circa 17.100.000 risultati di ricerca

Annuncio relativo a: tunnel design



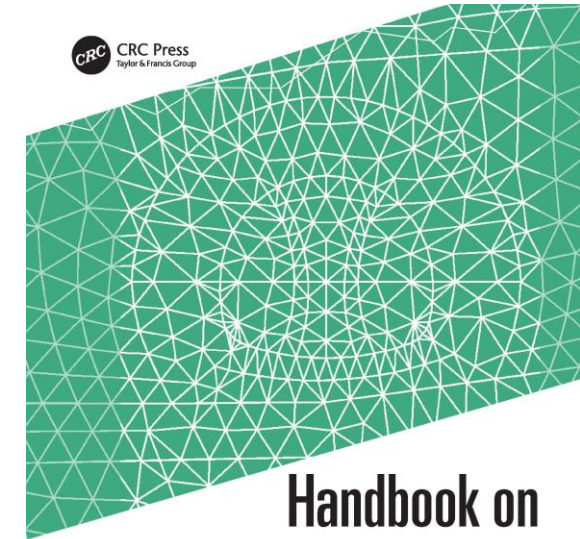
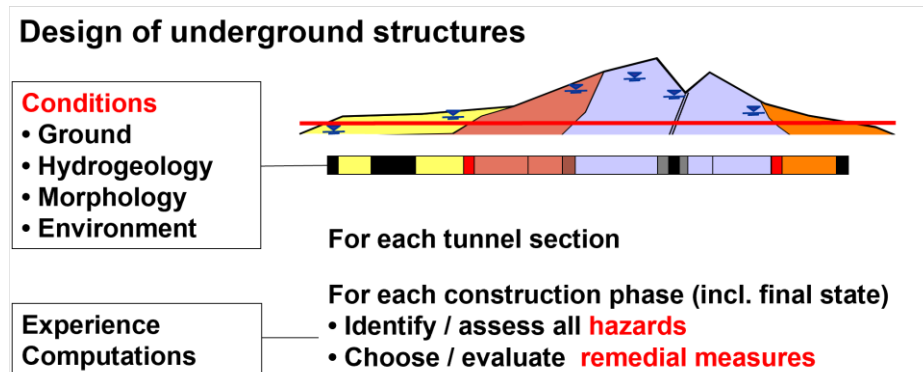
Necessità di “ordinare le idee”



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Il «cuore e l'anima» del volume è quello di sistematizzare dal punto di vista metodologico l'approccio progettuale basato sull'analisi e la gestione del rischio



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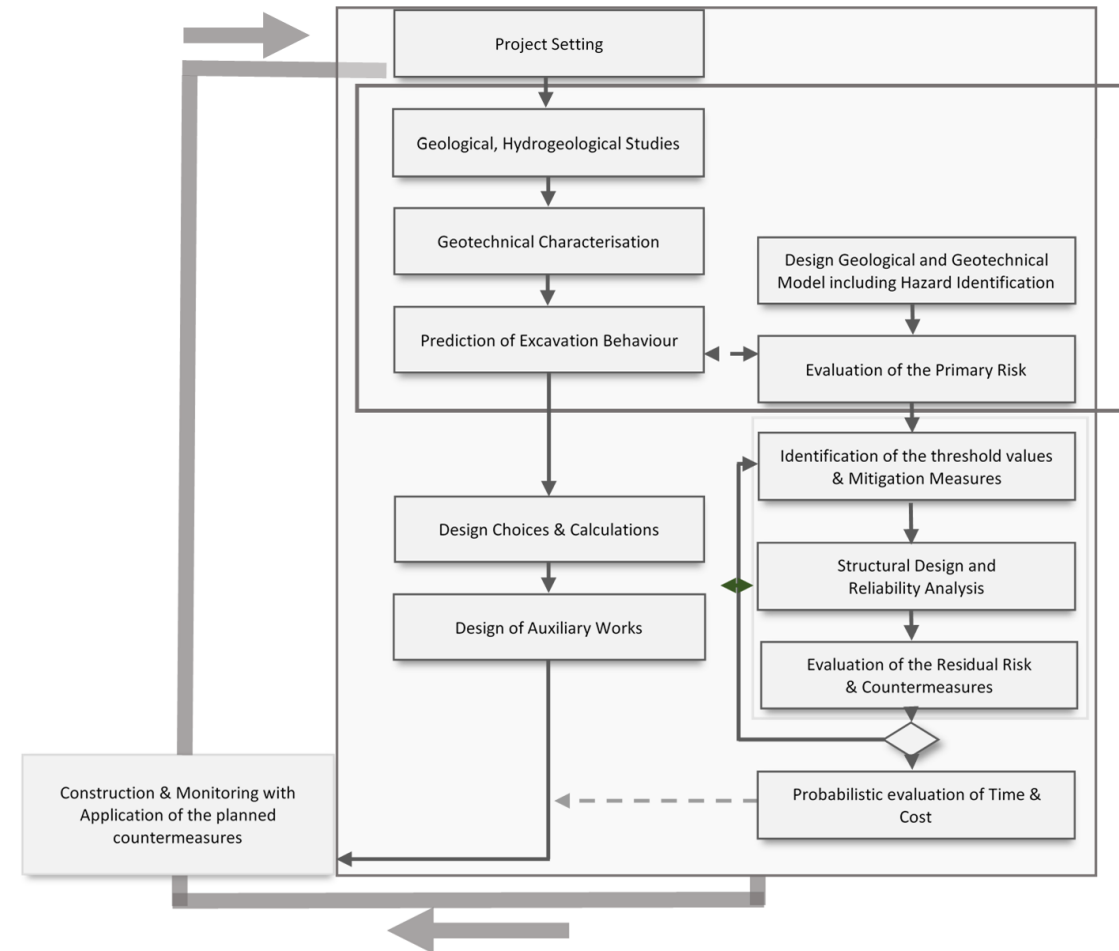
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Come definito dall'ITA fin dal 2004 la progettazione e costruzione di una galleria è un processo di ottimizzazione che deve essere basata su un appropriato risk management plant che deve tenere conto di quelle che sono le condizioni al contorno che si devono fronteggiare



Illustrative flow chart for a Risk Analysis-driven Design

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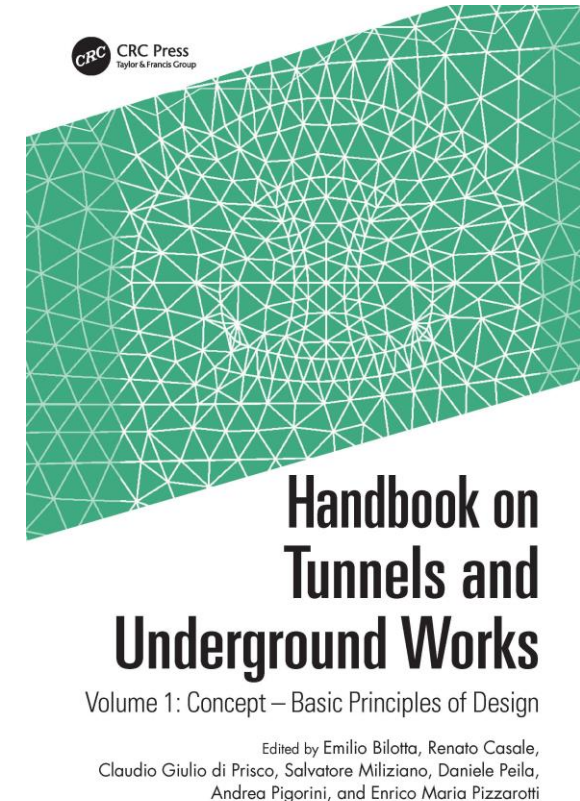
• Constraints identification

The **engineering constraints** derive from use and operational requirements (usually input data given from the client) and very often are detailed in national/international standards (for instance geometry, maximum slope, curvature, etc).

The **technological constraints** mainly derive from the tunnel geometry, geology and hydrogeology (Chapter 3) but also from specific aspects of the chosen excavation methods (Chapter 8). For instance, some excavation and support technologies cannot be adopted for excavations below the water table level, if the tunnel should be excavated in the proximity of buildings or underground infrastructures (e.g.: induced displacements, vibrations) and in case of swelling soil/rocks.

The **logistical constraints** are related to the organization of the whole construction phase, affecting times and costs. For instance: the use of a certain excavation technique (Chapter 8) requires space availability, management of the excavated muck (Chapter 5), supply and management of what necessary for implementing the chosen methodology/technology/machinery.

Socio-political constraints may affect tunnelling since tunnels are very often sensitive to the public opinion and stakeholders. This type of constraint must be identified and analyzed before the construction and a suitable strategy should be put in place to involve national and local communities (Chapter 13).

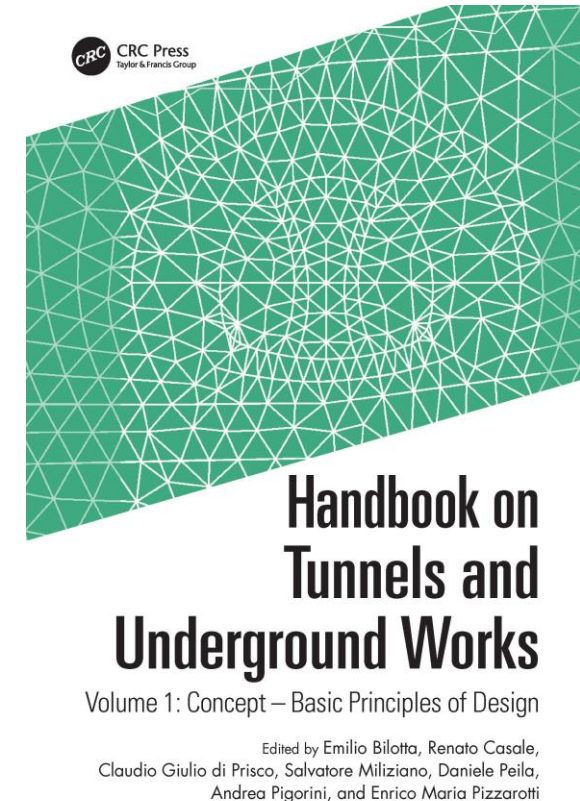


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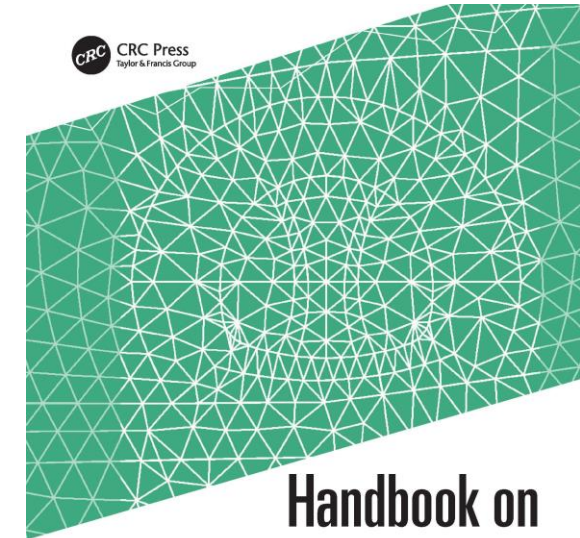
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Vorrei concludere sottolineando due punti che rivestono particolare importanza ed ai quali è stata dato risalto nel volume

La sicurezza è parte integrante della progettazione



La comunicazione verso gli stakeholder non è un optional ma è una chiave indispensabile anche per una buona progettazione



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