

THE ROLE OF ENGINEERING GEOLOGISTS IN GEOTECHNICAL ENGINEERING

VLOGA INŽENIRSKIH GEOLOGOV V GEOTEHNIČNEM INŽENIRSTVU

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In geotechnical engineering geologists play an important role and (shall) close the gap between geology and civil engineering. From own experience and in conversation with colleagues, however, the author increasingly gained the impression that often the knowledge of the importance has been lost, which scope of activities belong to engineering geology (including hydrogeology) and how diverse these tasks are.

Consequently, there is a need to redefine the mission statement of engineering geology and to highlight (again) the achievements of engineering geologists. In practice, however, there is hardly any understanding among builders, clients and authorities for the distinction between geotechnical engineers, geologists and engineering geologists. In German-speaking countries geotechnical issues are usually referred to as “geologists”, but geotechnical and engineering geological services are almost always called upon.

The author is civil engineer with specialization in geotechnical engineering and head of the Institute of Geotechnics at TU Wien consisting of two research centers, “Engineering Geology” (former chair Professor Josef Stini from 1925 to 1943, founder of engineering geology) and “Ground Engineering, Soil and Rock Mechanics” (first chair Professor Karl von Terzaghi from 1928 to 1939, founder of modern soil mechanics), thus, representing both fields of natural science (geology) and engineering science (civil engineering) (Brandl, 1983-1984 a, b; Kieslinger, 1958).

In the scope of the invited lecture the author will not report only on his personal experiences, but will reflect also a mood of the situation in Slovenia compared to that in Austria and in Germany. Definition and history of engineering geology will be presented as well as the academic educational system in various countries. Best practice examples of successful cooperation between geologists and civil engineers will be highlighted and case histories from the Alpine area including retaining structures and tunneling projects in complex geological and geotechnical conditions will be discussed (Adam et al., 2017).

Finally, the attempt will be made to answer the following questions aiming to create awareness of the important role of engineering geologists in geotechnical and civil engineering:

- What are engineering geologists educated for?
- What are the specific tasks of engineering geologists (including hydrogeologists) in the narrower field of geotechnical engineering?
- What makes engineering geologists special?
- What can or shall be the future role of engineering geologists?

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