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| Uni-LOGO | Fakultät für Physik**Isotopenphysik** |

I N V I T A T I O N
for a

V E R A - S E M I N A R

with

**Francesca Quinto**

Karlsruhe Institute of Technology – Institute for Nuclear Waste Disposal, Eggenstein-Leopoldshafen, Germany

**Radionuclide migration in crystalline host rock: insights from the Grimsel Test Site (CH)**

Crystalline rock, together with rock salt and claystone, is under consideration as suitable host rock for a high-level radioactive waste repository in Germany. Under the reducing conditions expected in a deep geological repository, the geochemistry of actinides and certain fission products, like 99Tc, is characterized by low solubility and strong sorption to mineral surfaces and colloids. This results in very low radionuclide concentrations in samples arising from laboratory and in-situ tracer tests tackling the retention capability of repository barriers. I will report on the outcomes of our twenty-year investigation on radionuclide migration with in-situ tracer tests in collaboration with the Grimsel Test Site (Switzerland), NAGRA´s (Nationale Genossenschaft für die Lagerung radioaktiver Abfälle) generic underground research laboratory located within the crystalline Aar Massif. I will discuss, in particular, the latest in-situ tests in which AMS analysis was applied, showing how the sensitivity of AMS strongly extends the time-scale over which radionuclide behavior can be investigated.

### Thursday, 16.01.2025, 16:30 o'clock

**1090 Wien, Währinger Str. 17, "Kavalierstrakt",
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 K. Hain S. Adler M. Martschini