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Paleo & Cultural Heritage: Neutron imaging in paleontology and technical applications

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The use of X-rays is always first choice because of easy availability and low cost - but when X-rays fail, there is a high probability that problems can be solved with neutron imaging, especially in archaeology and paleontology, where different fossilisation conditions render different contrasts for neutrons. The talk will give an overview about the examination of fossils embedded in 'red beds', iron containing rock, examination of fossilized hominid teeth, and other examples for neutron examination in cultural heritage.

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Dr Burkhard Schillinger currently works at the Forschungs-Neutronenquelle Heinz Maier-Leibnitz (FRM II), Technische Universität München. He is instrument scientist for the neutron imaging facility ANTARES, the facility with the brightest and best collimated beam world-wide. Burkhard does research in Experimental Physics, Materials Science and Nuclear Physics. Current projects include 'Humidity Transport in Insulations', fossils in iron 'red beds', namely hearing capabilities in Therapsids/pre-mammals, detector design and neutron imaging facility design as advisor for many international facilities.

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