



**UNESCO Chair on Geoenvironmental Disaster
Reduction in Shimane University**

**採択された島根大学ユネスコチェア「自然
災害軽減」について**



**How Virtual Reality may help
visualise and assess
geohazards
... and mitigate related risk
through better communication!**

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**Geological Hazards
and, more generally,
Natural / Environmental Hazards
are not ...**

**...1D logs, 2D maps ... with 3D
buildings, local time sequences,
3D geomodels, lab results,
graphs...numerical sections..!**

**All Hazards are 4D
and multi-scale**

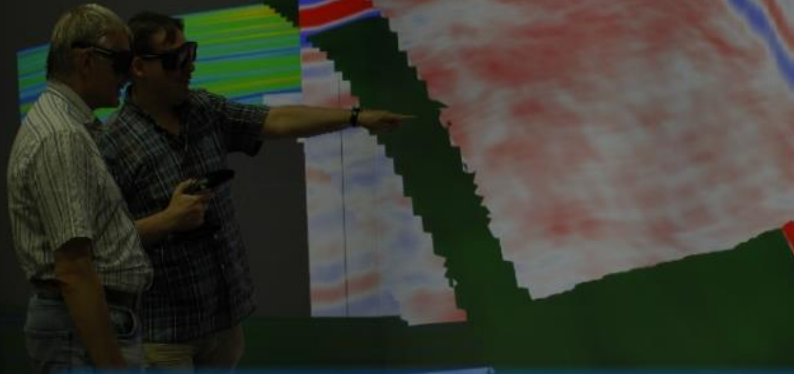
**Classical GIS tools are not adapted
to really approach complex hazard
problems;**

**3D numerical models are better ... at
local scale, but are often not well
integrated at regional scale**

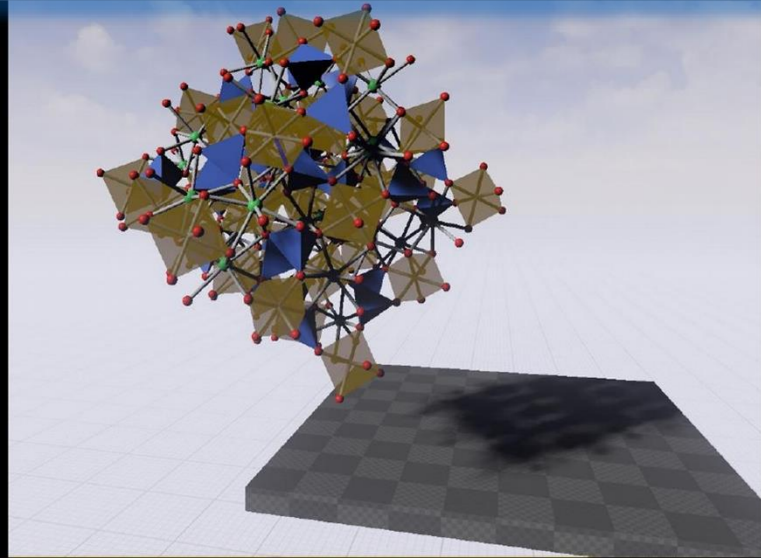
**Both approaches are confronted
to the same problem:**

**3D + Time dimensions are
just projected on a 2D plane**

... in the past, this could be justified by absence of adapted (affordable) soft- and hardware



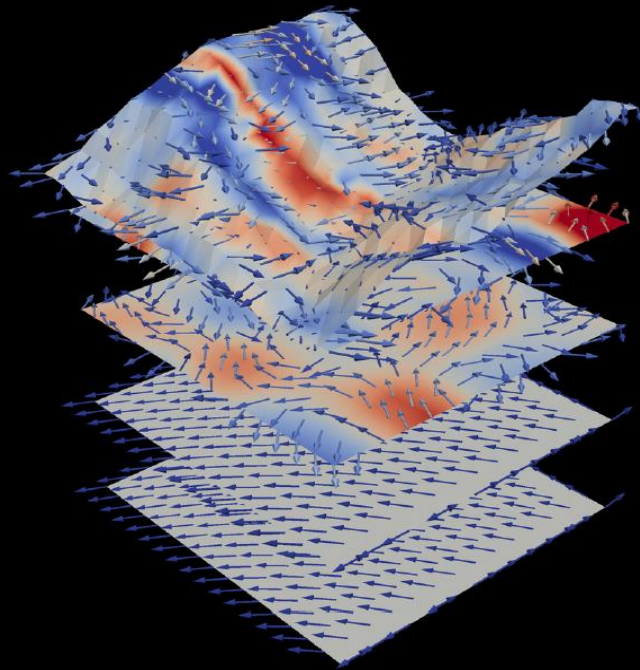
Now, we have 'cheap' VR technology



We are now developing regional 3D geodatabases, 4D numerical models ... visualised in VR!

I. VR in Geosciences

unsteady earthquake simulation data



I. VR in Geosciences

earthquakes, fault structures and landslides in Central Asia
Tien Shan & Pamir Region

