Freie Universität Berlin

Geowissenschaftliches Kolloquium

Moving water and sediment on Mars

Donnerstag, 5. Juni 2014 - 16.15 Uhr

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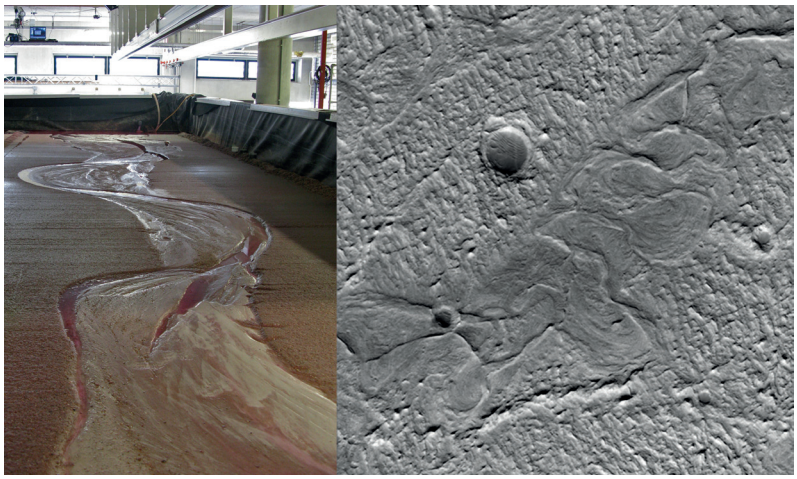
Flowing water on Mars formed valleys, river channels, alluvial fans and deltas in the past. Key questions for understanding the past climatic conditions on Mars are how much water was involved, how long this continued and when it happened. Several alternatives to ‚arm-waving science' are available, notably numerical modelling based on physics, scale experimentation and study of terrestrial analogue systems. This work showed that many rivers, fans and deltas were active for brief periods of time with only localised outflows of groundwater. Novel methods to create scale models of these systems will be shown and some of them are possible on the beach this summer.



Dr. Maarten Kleinhans works on large-scale morphology, sedimentology and vegetation patterns of rivers and deltas on Earth and Mars. After an MSc study on coastal and fluvial morphology, a PhD on sediment transport processes in rivers and a postdoc on coastal sediment transport, research focussed on increasingly larger scales. Combinations of numerical modelling and experimentation helped to bridge gaps between sedimentology, geomorphology, planetology and civil engineering.

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