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# Martian Gullies and their Earth Analogues

## Programme

Monday 20 June 2016	
08.30	<b>Registration &amp; tea, coffee</b>
<b>Session 1: Water and gullies at high obliquity</b>	
09.30	<b>Welcome Address</b> Susan Conway
09.45	<b>Recent (Late Amazonian) enhanced backweathering rates on Mars : paracratering evidence from gully-alcoves ?</b> Tjalling de Hass, Utrecht University
10.00	<b>Liquid H<sub>2</sub>O in martian gullies as a function of obliquity on Late Amazonian Mars</b> James Dickson, Brown University
10.15	<b>On the possibility of melting water ice on Martian slopes at higher obliquity</b> M. Vals, Laboratoire de Météorologie Dynamique (LMD)
10.30	<b>Formation and degradation of mid-latitude Martian gullies: Wind and dust</b> Allan Treiman, Lunar and Planetary Institute
10.45	<b>Tea &amp; coffee break</b>
<b>Session 2: Earth analogues</b>	
11.15	<b>Keynote speaker: Bill Dietrich, University of California, Berkeley</b>
11.45	<b>Gullies in Ladakh, India: potential analogues for Martian gullies</b> Rishitosh Sinha, Physical Research Laboratory
12.00	<b>Potential Martian analogues gullies in Tacna – Peru</b> Rómulo L. Cruz Simbrón, Sociedad Científica de Astrobiología del Perú
12.15	<b>A new Mars gully analog site in the Andes Mountain, Chile</b> Armando Azua-Bustos, Blue Marble Space Institute of Science
12.30	<b>Lunch</b>
<b>Session 3: Gullies, volatiles - CO<sub>2</sub> and ices</b>	
13.30	<b>Frost or wind or something else: investigating present-day gully formation within the north polar erg</b> Serina Dinega, Jet Propulsion Laboratory
13.45	<b>Volatiles and minerals composition at active Mars gullies</b> Mathieu Vincendon, Université Paris-Sud
14.00	<b>Controls on sediment the transport capacity of carbon dioxide sublimation under Martian conditions: experimental results</b> Matthew Sylvest, University of Arkansas

14.15	<b>The instigation of dry-gully morphology by CO<sub>2</sub> block movement across dark basaltic dunes, Arizona</b> M Bourke, Planetary Science Institute
14.30	<b>Tea &amp; coffee break</b>
<b>Session 4: CO<sub>2</sub> gully processes and experiments</b>	
15.00	<b>Formation of gullies on Mars by debris flows triggered by CO<sub>2</sub> sublimation</b> C. Pilorget, Laboratoire de Météorologie Dynamique (LMD)
15.15	<b>Deep incision of the latitude dependent mantle in Martian gullies formed by CO<sub>2</sub> sublimation processes</b> F. Forget, Laboratoire de Météorologie Dynamique (LMD)
15.30	<b>The unexpected geomorphological impact of metastable boiling water on Mars</b> M. Massé, Université de Nantes
15.45	<b>Experimental simulation of Martian gully formation: a debris flow framework</b> John Dixon, University of Arkansas
16.00	<b>Discussion</b>
17.00 – 18.00	<b>Reception</b>

<b>Tuesday 21 June 2016</b>	
09.15	<b>Registration &amp; tea, coffee</b>
<b>Session 5: Earth analogues</b>	
09.45	<b>Gullies and debris flows in continental Antarctica : analogues for recent aqueous processes on Mars</b> Ernst Hauber
10.00	<b>New insights into processes influencing submarine gully morphology</b> Jenny Gales, National Oceanography Centre
10.15	<b>Debris flow recurrence intervals on an alluvial fan in Hanaskogdalen (Svalbard)</b> Dennis Reiss, Westfälische Wilhelms-Universität
10.30	<b>Descending dunes observations for Dakhla Oasis, Egypt and Russel Crater, Mars</b> Krzysztof Skocki, Institute of Aviation
10.45	<b>Tea &amp; coffee break</b>
<b>Session 6: Present-day activity</b>	
11.15	<b>Keynote Speaker</b>  <b>Small Martian gullies associated with recurring slope lineae (RSL)</b> Alfred McEwen, University of Arizona
11.45	<b>An active gully on Mars: accumulation and seasonal mobilisation of material</b> Kelly Pasquon, Université Paris-Sud
12.00	<b>Recent and present-day activity of Martian gullies</b> Jan Raack, The Open University
12.15	<b>Monitoring Martian gullies: Implications for formation and evolution</b> Colin Dundas, U.S. Geological Survey

12.30	<b>Lunch</b>
<b>Session 7: Periglacial gullies</b>	
13.30	<b>Gullies, mantled terrain, thermokarst and small-scale polygons in the Argyre region, Mars: a critical discussion of their spatial-association</b> R. Soare, Dawson College
13.45	<b>Patterns of Martian deglaciation: assessing the distribution of paraglacial features in mid-latitude craters</b> Erica Jawin, Brown University
14.00	<b>Thermal inertia of gully fans as an indicator of gully activity</b> Tanya Harrison, University of Western Ontario
14.15	<b>Gullies on Mars: climate history context and earth analog insights for an integrated model of CO<sub>2</sub> and H<sub>2</sub>O-related formation</b> James Head, Brown University
14.30	<b>Tea &amp; coffee break</b>
<b>Session 8: Granular, numerical and software</b>	
15.00	<b>Keynote speaker: Anne Mangeney, IPGP</b>
15.30	<b>Examination of origins of lobate landforms with gullies on Mars from an inverse analysis of debris-flow deposits</b> Hajime Naruse,
15.45	<b>Automatic detection of changes in Martian gullies from co-registered high-resolution visible images</b> P. Sidiropoulos, University College London
16.00	<b>Discussion &amp; closing remarks</b>
17.00	<b>Close of conference</b>