

# DFHM7 Preliminary Program

April 27, 2019

## Monday, June 10, 2019

8:30-8:50	<b>Welcome Address and Announcements</b>
	<b>3 Theme: Processes/Mechanics</b>
	<i>Moderator: Jeff Coe</i>
8:50-9:20	<b>Nico Gray (UK) - Erosion-deposition waves in geophysical mass flows and the spontaneous formation of levees and surges</b>
9:20-9:40	<b>Richard Iverson (USA) [2441]</b> Valid debris-flow models must avoid hot starts
9:40-10:10	<b>Anne Mangeney (France)</b> Simulation of mechanical processes in debris flows and of their signature on the generated seismic signal
10:10-10:30	<b>Break</b>
10:30-10:50	<i>Moderator: Jason Kean</i>
	<b>Norifumi Hotta (Japan) [3249]</b> How does particle-size segregation affect the fluidity of multi-granular debris flows?
10:50-11:10	<b>Kimberly Hill (USA) [2568]</b> Erosion by experimental debris flows: particle size effects
11:10-11:30	<b>Kahlil Cui (China) [2373]</b> Numerical Investigation of Particle Size Segregation in Saturated Granular Flows using CFD-DEM Coupling Approach
11:30-1:00	<b>Lunch</b>
	<b>4 Theme: Monitoring, Detection, Warning</b>
	<i>Moderator: Liz Bowman</i>
1:00-1:30	<b>Kate Allstadt (USA) [2395]</b> Overcoming barriers to progress in seismic monitoring and characterization of debris flows and lahars
1:30-2:00	<b>Brian McArdell (Switzerland) [2438]</b> Monitoring, Detection, and Early Warning Systems for Debris Flows: Experience from Switzerland
2:00-2:20	<b>Masaki Murasawa (Japan) [2386]</b> Observations on the Development and Decay Processes of Debris Flows
2:20-2:40	<b>Velio Coviello (Italy) [2471]</b> Deciphering sediment dynamics in a debris flow catchment: insights from instrumental monitoring, topographical surveys and bedload sampling
2:40-3:00	<b>Yi-Min Huang (Taiwan) [2413]</b> The Vibrational Characteristics of Debris Flow in Taiwan
3:00-3:20	<b>Break</b>

3:20-3:40	<b>Moderator: Mark Reid</b>
	<b>Marcel Hürlimann (Spain)</b> [2396] Monitoring of rainfall and infiltration at the Rebaixader torrential catchment (Central Pyrenees)
3:40-4:00	<b>Katy Barnhart (USA)</b> [2510] Topographic change detection at Chalk Cliffs, CO using Airborne LiDAR and UAS-based Structure from Motion photogrammetry
4:00-4:20	<b>Xiaojun Guo (China)</b> [2426] Real-time observation of an active debris flow watershed in the Wenchuan Earthquake area, China -
4:20-4:40	<b>Georg Nagl (Austria)</b> [2407] Measurements of velocity profiles in natural debris flows: a view behind the muddy curtain
4:40-5:00	<b>Dominique Laigle (France)</b> [2394] Implementation of an Integrated Management Strategy to Deal with Landslide Triggered Debris Flows: the Valloire Case Study (Savoie, France)
6:00-8:30	Reception: MINES Geology Museum

## Tuesday, June 11, 2019

### 6 Theme: Experiments/Modeling

**Moderator: Marcel Hurlimann**

8:00-8:30	<b>Liz Bowman (UK)</b> <b>Particulate approaches to experimental and numerical modelling of debris flows</b>
8:30-9:00	<b>Dave George (USA)</b> [2505] Seamless Numerical Simulation of a Hazard Cascade in which a Landslide Triggers a Dam-Breach Flood and Consequent Debris Flow
9:00-9:20	<b>Dieter Rickenmann (Switzerland)</b> [2435] Small scale debris-flow experiments on run-up height
9:20-9:40	<b>Thad Wasklewicz (USA)</b> [2919] Reproducibility of debris-flow fan physical modeling experiments
9:40-10:00	<b>Coffee Break</b>
10:00-10:20	<b>Moderator: Mark Reid</b>
	<b>Rex Baum (USA)</b> [2518] Parameter uncertainty in modeling debris-flow initiation during the September 2013 Colorado Front Range storm
10:20-10:40	<b>Tsunetaka Haruka (Japan)</b> [2414] Experimental Examination for Influence of Debris Flow Hydrograph on Development Processes of Debris Flow Fan
10:40-11:00	<b>Christian Scheidel (Austria)</b> [2472] Debris flow behaviour in super- and subcritical conditions
11:00-11:20	<b>Masato Kobiyama (Brazil)</b> [2445] Debris flow hazard investigation in a rural basin, Alto Feliz municipality (Brazil), with Kanako-2D

11:20-12:45	<b>Lunch</b>
<b>5 Theme: Role of Disturbance (Fire/Climate change/Logging)</b>	
<b>Moderator: Dieter Rickenmann</b>	
12:45-1:15	<b>Fumitoshi Imaizumi (Japan) [2450]</b> Effects of terrain on temporal changes in susceptibility of debris flows and associated hydrogeomorphic processes after forest harvesting
1:15-1:45	<b>Luke McGuire (USA) [2442]</b> Looking through the window of disturbance at post-wildfire debris flow hazards
1:45-2:05	<b>Paul Santi [2956]</b> Rainfall intensity limitation and sediment supply independence of post-wildfire debris flows in the western U.S.
2:05-2:20	<b>Coffee Break</b>
2:20-2:40	<b>Moderator: Yoshifumi Satofuka</b>
	<b>Fangzhou Liu (USA) [3270]</b> The debris flows and mitigation systems after the 2008 Wenchuan Earthquake
2:40-3:00	<b>Jeffrey Keaton (USA) [2543]</b> Overview of the Geotechnical Effects of the January 9, 2018, Debris-Flow and Flash-Flood Disaster in Montecito, California, from Intense Precipitation on Recently Burned Slopes
3:00-3:20	<b>Petter Nyman (Australia) [2563]</b> A Novel Approach for Determining Risk of Water Supply Disruptions due to Post-Wildfire Debris Flows
3:20-6:30	Poster Session/Reception
7:00	Dinner on your own

## Wednesday, June 12, 2019

<b>2 Theme: Case Studies/Hazard Assessment</b>	
<b>Moderator: Liz Bowman</b>	
8:00-8:30	<b>Jeremy Lancaster (USA) [2418]</b> The Santa Barbara and Ventura County, California, Debris Flows of 9 January 2018: A Review of Post-Fire Debris Flow Initiation Areas, Triggering Precipitation and Impacts
8:30-9:00	<b>Alex Densmore (UK) [2430]</b> Making Sense of Avulsions on Debris-Flow Fans

9:00-9:20	<b>Jeff Farrell (New Zealand)</b> [2385] Debris Flow Risk Management in Practice: A New Zealand Case Study
9:20-9:40	<b>David Bonneau (Canada)</b> [2383] Characterizing Debris Transfer Patterns in the White Canyon, British Columbia with Terrestrial Laser Scanning
9:40-10:00	<b>Coffee Break</b>
10:00-10:20	<b>Moderator: Marcel Hurlimann</b>
	<b>Roland Kaitna (Austria)</b> [2406] Hydro-meteorological trigger conditions of debris flows in Austria
10:20-10:40	<b>Sophia Zubrucky (Canada)</b> [2443] Regional calibration of a numerical debris flow runout model
10:40-11:00	<b>Cristoph Graf (Switzerland)</b> [2428] An Overview of more than a Decade of Applied Debris-Flow Runout Modelling in Switzerland: Challenges and Recommendations
11:00-11:20	<b>Sara Rathburn (USA)</b> [2512] Debris Flow Occurrence in Rocky Mountain National Park, CO
11:20-12:45	<b>Lunch</b>
<b>2 Theme: Case Studies/Hazard Assessment</b>	
<b>Moderator: Dieter Rickenmann</b>	
12:45-1:15	<b>Mike Chard (USA) - Pound of preparedness is worth a pound of debris</b>
1:15-1:45	<b>Mattias Jakob (Canada) [2856] Debris flow hazard and risk assessments - a practitioner's view</b>
1:45-2:05	<b>Ting-Chi Tsao (Taiwan)</b> [2532] Debris flow building damage level and vulnerability curve – A case study of a 2015 Typhoon event in northern Taiwan
2:05-2:20	<b>Coffee Break</b>
2:20-2:40	<b>Moderator: Yoshifumi Satofuka</b>
	<b>Bianca Vieira (Brazil)</b> [2515] Debris flow in Southeast Brazil: Susceptibility and Vulnerability Assessment of Buildings
2:40-3:00	<b>Paul Duhart (Chile)</b> [2519] The Santa Lucía landslide disaster, Chaitén-Chile (43.4°SL): origin and effects
3:00-3:20	<b>Mark Reid (USA)</b> [2444] Debris-flow Initiation Promoted by Extension of a Slow-moving Landslide
3:20-6:30	Poster Session/Reception
7:00	Dinner on your own

## Thursday, June 13, 2019

---

### 7 Theme: Engineering/Mitigation

*Moderator: Jeff Coe*

---

8:00-8:30 **Johannes Hübl (Austria)** [2508] From practical experience to national guidelines for debris flow mitigation measures in Austria

---

8:30-9:00 **Ken Ho (Hong Kong)** [2558] Debris Flow Mitigation - Research and Practice in Hong Kong

---

9:00-9:20 **Nadine Feiger (Switzerland)** [2393] Scour and erosion experience on flexible debris flow nets

---

9:20-9:40 **Hua-Yong Chen (China)** [2424] Scour Depth Prediction behind a Check Dam by Overtopping Debris Flows

---

9:40-10:00 **Coffee Break**

---

10:00-10:20 *Moderator: Jason Kean*

**Mattias Busslinger (Canada)** [2553] Hitchhiker's Guide to Physical Debris Flow Mitigation – Overview of Existing Guidelines for Design, Construction and Operation

---

10:20-10:40 **Jiangang Chen (China)** [2381] Debris-flow Mitigation Measures and an Application Case in a Small-scale Watershed

---

10:40-11:00 **Shin-Kyu Choi (South Korea)** [2500] Roles of Barrier Location and Arrangement for Effective Debris Flow Mitigation: Assessment using SPH numerical modeling

---

11:00-11:20 **Nicoletta Sanvitale (UK)** [2539] Small scale impact on rigid barrier using transparent debris flow models

---

11:20-11:40 **Conference Wrap up**

---

2:00 Departure Debris flows in Chalk Creek Valley (2 day field trip)

---