

PROTECTIONS 2018

3rd International Conference on Protections against Overtopping

6-8 June 2018

Grange-over-Sands, UK



Programme

Wednesday 6 June 2018

08:30 Registration

09:25 Welcome

Session 1: The Overtopping Simulator (Chair: Pullen)

09:30 **Keynote:** Hydraulic simulators on real dikes and levees. *J.W. van der Meer*

10:00 Summary of research work about erodibility of grass revetments on dikes. *G. Hoffmans*

10:20 Modelling wave overtopping for flood defense reliability. *J.J. Warmink*

10:40 Refreshments

Session 2: Wave overtopping developments (Chair: Pearson)

11:00 Waves, wave overtopping discharges and wave overtopping volumes on reservoir structures. *T. Pullen*

11:20 WireWall: a new approach to coastal wave hazard monitoring. *J.M. Brown*

11:40 Behaviour of a moveable barrier on revetment for mitigation of disaster by wave overtopping. *J.H. Seo*

12:00 Forecasting coastal overtopping: What's the worst that can happen? *I.M. Gold*

12:20 Discussion

12:40 Lunch

Session 3: Soil erosion (Chair: Hepler)

13:40 Comparing soil erodibility predictions against the fundamental understanding of erosion. *M. van Damme*

14:00 Erosion resistant dikes thanks to soil treatment with lime. *G. Herrier*

14:20 Quantifying the erosion resistance of dikes with the overflowing simulator. *S. Bonelli*

14:40 Revetment failure tests in the River Experiment Center. *D.H. Lee*

15:00 Soil / structure transitions. *J. Simm*

15:20 Refreshments

Session 4: Stabilisation and resistance (Chair: Courivaud)

15:50 Ice overtopping of embankments: Ice-tank experiments and field observations. *R. Ettema*

16:10 Managing legacy infrastructure into the future: The River Winster and Meathop Drain flood risk. *D. Glasson*

16:30 Determination of erosion parameters of coarse-grained materials using a small flume. *G.S. Ellithy*

16:50 The effect of a stabilized stone drainage layer on ACB performance in open channel flow applications. *J. Nadeau*

17:10 Day one review

17:30 Close day 1

Evening - Free

Thursday 7 June 2018

09:00 Welcome & announcements

Session 5: Modelling protection (Chair - Moran)

09:10 **Keynote:** Recent advances in the numerical simulation of the failure of rockfill dams in overtopping scenarios. *A. Larese*

09:40 tbc

10:00 A new evolution on the wedge-shaped block for overtopping protection of embankment dams: the ACUÑA block. *F.J. Caballero*

10:20 Numerical modelling of skimming flow over small converging spillways. *F. Nunes*

10:40 Refreshments

Session 6: Dams and Levees (Chair - Simm)

11:00 An overview of levees and reservoirs in England. *C. Mitchell*

11:20 The effect of material zones and layers on breach growth and prediction. *M. Morris*

11:40 Overflowing erosion modelling of embankment dams and dykes: state of the art and research needs. *J-R. Courivaud*

12:00 Increasing the resilience and improving the environmental performance of earthen flood defense structures with high performance turf reinforcement mat reinforced vegetation. *R. Thompson*

12:20 Discussion

12:40 Lunch

Session 7: Applied Overtopping (Chair - Brown)

13:40 Distribution of wave by wave overtopping volumes at vertical seawalls. *M. Salauddin*

14:00 Wave overtopping pressures and spatial distribution behind rubble mound breakwaters. *P.J. Watson*

14:20 Physical model tests to determine the roughness of stair shaped revetments. *P. van Steeg*

14:40 Alde and Ore estuary, U.K. - levee overtopping performance - defence upgrade with 50 km of simultaneous overtopping. *A. D. Hawes*

15:00 Two large-scale test channels for overtopping and earthquake-flood compounded disasters. *Y. Nihei*

15:20 Refreshments

Session 8: Dam Overtopping & Protection (Chair - Morris)

15:50 Successful Overtopping Protection Projects in the Eastern U.S. *T. Hepler*

16:10 Influence of the anisotropy of the material on the pore water pressures within the downstream shell of a rockfill dam in overtopping scenario. *J.C. Diaz*

16:30 Protection of embankment dam toe and abutments under overtopping conditions. *G.H.R. Ravindra*

16:50 Advances in the characterization of pressures and velocities in the overtopping of arch and gravity dams. *L.G. Castillo*

17:10 Close and Review (Pullen et al)

19:30 Conference dinner - conference hotel

Field trip

Time	Itinerary
08:30	<p>Leave Grange Hotel</p> <p>Travel to Thirlmere reservoir (via Newby Bridge, Windermere and Grasmere) Mike Dixon (United Utilities)</p>
10:00	<p>Arrive head of Thirlmere</p> <p>View road erosion and repairs Mike Dixon (United Utilities)</p>
11:00	<p>Travel to Thirlmere draw off tower</p> <p>Observe where rock fall consumed and closed A591 Mike Dixon (United Utilities) Michael Harper (Environment Agency)</p>
11:30	<p>Leave for Kings Head Inn</p> <p>Presentation on Thirlmere Dam Mike Dixon (United Utilities) Buffet lunch</p>
12:45	<p>Leave for Thirlmere Dam</p> <p>Visit Thirlmere Dam Mike Dixon (United Utilities)</p>
13:30	<p>Leave for Keswick</p> <p>Visit Keswick flood alleviation scheme Michael Harper (Environment Agency)</p>
14:00	<p>Leave for Glenridding (via A65, A5901 and Ullswater)</p> <p>Visit Glenridding flood damage and repairs Michael Harper (Environment Agency)</p>
15:00	<p>Return to Hotel (via Kirkstone Pass)</p>
16:00	<p>Arrive Hotel</p>