



10 - 13 September 2018
Politecnico di Milano

AULA DE DONATO
P. Leonardo da Vinci 32, Milano

MONDAY September 10		
17:00	Registration	
18:00		Ice-breaker
19:00		

TUESDAY September 11	
08:30	Registration
08:50	Opening

09:10	Session 1: Laboratory techniques and findings (1/2)	
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09:10	Boucher M., Béguin R., Courivaud J.-R.	Development of a new apparatus for the Jet Erosion Test (JET)
09:30	Marot D., Bendahmane F., Le V.T.	New apparatus for assessing soil suffusion susceptibility under two flow directions
09:50	Sanvitale N., Bowman E.T., Black J.A.	Viewing fluid flow inside a granular medium
10:10	Aboul Hosn R., Benahmed N., Nguyen C.D., Sibille L., Philippe P., Chareyre B.	Effects of suffusion on the soil's mechanical behavior: experimental investigations

10:30	coffee break	
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11:00	Session 2: Laboratory techniques and findings (2/2)	
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11:00	Silva I., Viklander P., Laue J.	Effects of void ratio and hydraulic gradient on permeability and suffusion of glacial till cores
11:20	Petrula L., Hala M., Říha J.	Uncertainty in determining the critical hydraulic gradient of uniform glass beads
11:40	Béguin R., Oxarango L., Sapin L., Garandet A., Viglino A., François E., Mora H., Martins F., Duchesne L., Albrecht D., Gutjahr I., Lépine L.	Experimental tests of soil reinforcement against erosion and liquefaction by microbially induced carbonate precipitation
12:00	Clara Saracho A., Haigh S.	Experimental optimisation of Microbially Induced Calcite Precipitation (MICP) for contact erosion control in earth dams
12:20	Fannin J., Slangen P., Ataii S., McClelland V., Hartford D.	Erosion of zoned earthfill dams by internal instability: laboratory testing for model development
12:40	Gaber F., Bowman E.T.	The role of seepage flow rate and deviatoric stress on the onset and progression of internal stability in a gap-graded soil

13:00	lunch	
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14:00	Session 3: From modelling to design criteria (1/2)	
14:00	Seblany F., Vincens E., Picault C.	Simplified estimation of some main characteristics of pores and constrictions in granular materials
14:20	Rousseau Q., Sciarra G., Gelet R., Marot D.	Constitutive modeling of a suffusive soil with porosity-dependent plasticity
14:40	Wautier A., Nicot F., Bonelli S.	Suffusion impact on the mechanical stability of granular materials
15:00	Polanco-Boulware L., Rice J.	Reliability underseepage assessment of levees incorporating geomorphic features
15:20	Robbins B.A., Griffiths D.V.	Modelling of backward erosion piping in two- and three-dimensional domains
15:40	coffee break	
17:00	social event in Milano centre	

WEDNESDAY September 12		
09:00	Session 4: From modelling to design criteria (2/2)	
09:00	Scheuermann A., Harshani H.M.D., Galindo-Torres S.A.	Micro-scale flow conditions leading to the onset of erosion
09:20	Bouziiane A., Benamar A., Tahakourt A.	Finite element analysis of internal erosion effect on the stability of dikes
09:40	Federico F., Cesali C.	A numerical procedure to simulate particle migration at the contact between different materials in earthfill dams
10:00	Rotunno A.F., Callari C., Froio F.	A numerical approach for the analysis of piping erosion in hydraulic works
10:20	Takahashi A., Kokaki H., Maruyama T., Horikoshi K.	Numerical and physical modelling of seepage-induced internal erosion around holes on permeable sheet pile
10:40	coffee break	
11:10	Session 5: Prevention measures and field assessment (1/2)	
11:10	Akrami S., Bezuijen A., Rosenbrand E., Koelewijn A., Förster U., van Beek V.	Investigating the formation of a filter cake in column experiments, for combinations of filter and fine sand in a coarse sand barrier
11:30	Rosenbrand E., van Beek V., Koelewijn A., Akrami S., Förster U., van Gerven K., Bezuijen A.	Scale effects in coarse sand barrier experiments
11:50	Bezuijen A., van Beek V., Rosenbrand E., Akrami S.,	Analytical groundwater flow calculations for understanding the flow and erosion in a coarse sand barrier
12:10	Cesali C., Federico V.	Detection of permeability defects within dams and levees through coupled seepage and heat transport analyses
12:30	Garuti D., Jommi C., Rijkers R.	The role of the hydraulic resistance of the river bed and the time dependent response of the foundation layers in the assessment of water defences for macrostability and piping
12:50	lunch	

14:00	Session 6: Prevention measures and field assessment (2/2)	
14:00	Bossi G., Bersan S., Cola S., Schenato L., De Polo F., Menegazzo C., Boaga J., Cassiani G., Donini F., Simonini P.	Multidisciplinary analysis and modelling of a river embankment affected by piping
14:20	Giliberti M.D., Cirincione M., Cavagni A.	Impact of the use of 3D modeling on sand boil risk management
14:40	Robbins B.A., Doughty M., Griffiths D.V.	A statistical framework for incorporating sand boil observations in levee risk analysis
15:00	Zhang L., Gelet R., Marot D., Smith M., Konrad J.-M.	Assessing suffusion susceptibility of soils by using construction data: application to a compacted till dam core
15:20	coffee break	
16:00	Session 7: Open issues for discussion and contribution	
16:00	Aielli S., Pavan S., Parodi S., Rosso A., Tanda M.G., Marchi M., Vezzoli G., Pantano A., Losa D., Sirtori M.	Collection and analysis of the reactivation data of the historical sand boils in the Po river levees
16:20	van Beek V., Wiersma A., van Egdorn M., Robbins B.A.	Databases for backward erosion piping laboratory experiments and field observations
16:40	Bridle R.	An update on ICOLD Bulletin 164 on internal erosion
17:00	Říha J., Alhasan Z., Petrula L., Popielski P., Dąbska A., Fry J.J., Solski S.V., Perevoshchikova N.A., Landstorfer F.	Harmonization of terminology and definitions on soil deformation due to seepage
17:20	final discussion and closure	
20:00	conference dinner	

THURSDAY September 13	
09:00	Technical visit
09:00	Bus departure from Politecnico
10:30	Visit along River Po
13:30	Lunch
14:30	Visit at the AIPO Laboratory for physical modelling, in Boretto (Reggio Emilia)
16:30	Bus departure from AIPO Laboratories
18:00	Approximate arrival time at Politecnico