



Monday 15th September

9:00-17:00

Short Course 1 – Room 3.3

Using geosynthetics to adapt to climate changes

Short Course 2 – Room 3.4

Mechanical protection structures with geosynthetics

Tuesday 16th September

9:00-9:30

Opening Ceremony in Grand Theatre

9:30-10:30

Keynote Lecture: BENETTO ENRICO

A Safe and Sustainable by Design approach to geosynthetics development
BENETTO E.

11:00-12:00

Committee DEI: FELLETTI DANIELA

Approach to Diversity, Equity and Inclusion

12:00-12:45

Exhibition Opening

ROOM 2.3+2.4

14:15-16:00

Session 1A - Sustainability and Durability (1)

Session Chairs: LEPPÄNEN M., DAMIANS P.

Geosynthetics, a key brick of the energy transition
WETZEL H., van HELDEN W., SØRENSEN P.A., MICOLLIER V.

Greener unpaved forest roads: costs and emissions analysis of solutions with an industrial byproduct and a geosynthetic
RODRIGUES D., MARTINS C., CARLOS D., PREISWERKS., MONTEZ P., MACEDO J., PINHO-LOPES M.

Comparative Life Cycle Assessment of a slope protection on a railway embankment
WITTL T., KLÜGEL S., VOLLMERT, EHRENBERG H.

Technical solutions for reducing CO2 footprint in MSE wall constructions
GRANDCLERC A., JOUSSELLIN T.

Comparative environmental life cycle assessment of a temporary road, a study on behalf of the EAGM
EHRENBERG H., GRUBER J.

Sustainability assessment of liquefaction instability mitigation solutions for the World's highest observation wheel project in Dubai
PUTHIYA VEETIL J., TROVATO F., LUGLI G.

Effects of ageing in a saturated environment on the functional properties of hemp geotextiles
DABIRET S. A., ROURE, F., FARCAS F., MAKKI L., MAILLER P., REIFFSTECK P., VAN SCHOORS L.

16:30 - 18:15

Session 2A - Sustainability and Durability (2)

Session chairs: HEILI V., FRASER I.

Geosynthetic multilayered composite: innovative development, applications and life cycle assessment
FERRARA M., LUGLI G.

Potential release of microplastics from geosynthetic applications: a case study in Europe
CAZZUFFI D., De MEYER S., FONTANA F.

Potential microplastic release from gabion mattresses: a quantitative assessment
BROCCA G., MASOLA F., BORN M.P., SCHILLER S.

High performance and recyclable geosynthetic for stabilisation and platform reinforcement
NANCEY A., ABDELOUHAB A.

Geotextile durability by outdoor weathering and tensile creep: case study
ALVES GUIMARÃES M. G., URASHIMA D., URASHIMA B. M.

Evaluation of the degradation of polypropylene geotextiles under real coastal conditions and UV radiation exposure
WEYNEMI CAVALCANTE DOS SANTO E., LIZANDRA MARIA FERREIRA GURGEL L., FELINTO DE LIMA NETO F., ALEXANDRE NUNES DE FRANÇA F.

Water storages with PVC liners and floating covers
SADLIER M.

ROOM 3.5+3.6

14:15-16:00

Session 1B - Testing, Quality (1)

Session chair: GUERRA-ESCOBAR P.

Assessing the shear-strength properties of geomembranes textured using the spray-on technique
BLOND E., TARNOWSKI C.

Experience of a certification body with the quality of external testing in the certification process
HESSING C., RECKER C.

Laboratory tests on stabilization of railway ballast with geogrid
SOMOV D., PETRIAIEV A.

Dry abrasion evaluation of geotextiles with different test standards
FIERRO G.

Considering the deformation of nonwovens to follow the behavior on site
EHRENBERG H., RETZLAFF J.

Studies on the sound generated during the tensile test on nonwoven geotextiles
NICCOLAI F.

16:30 - 18:00

Session 2B - Testing, Quality (2)

Session chair: BLOND E.

Design of unpaved forest roads - stress-strain response of a reinforced soil under triaxial conditions
CARLOS D., CAFÔFO O., MACEDO J., PINHO-LOPES M.

Enhancing reinforced soil performance: polymeric coated steel woven wire mesh and geogrid interaction in composites systems
BROCCA G., VICARI M., LUGLI G.

Development of shear resistance at cohesive soil – geotextile interfaces
MARKOU I., EVANGELOU E.

Evaluating the interaction between geogrid and recycled aggregate using pullout tests
KHAN A. R., DI EMIDIO G., DENIES N.

Influence of construction method on pullout resistance of polymeric strap reinforcement
MONCADA A., GIRBAU N., DAMIANS I.P., OLIVELLA S., BATHURST R. J.

Fibre reinforcement of a uniform sand: stress-penetration and stress-strain responses
MARTINS C., RODRIGUES D., CARLOS D., MORAIS S., MACEDO J., PINHO-LOPES M.

ROOM 3.8 LE LOUNGE

14:15-16:00

Session 1C - Reinforcement applications (1)

Session chair: ALEXIEW D.

Experimental studies on groups of stone columns with various shapes of geotextile
BAZZAZIAN BONAB S., LAJEVARDI S. H.

Design of geosynthetics for rigid inclusion ground improvement: a simplified analytical method
ALZATE A.M., SIMON B., BRIANÇON L.

Soil arching in geosynthetic and steel grid-reinforced pile-supported embankments
VAN EEKELEN S., SCHNEIDER M., HELL M., PANDREA P., SCHAUBER P., TOPOLNICKY M., MAKOWSKA K., ZACHERT H., BEZUIJEN A.

Experimental and numerical model in geosynthetic pile embankment
LAJEVARDI S. H., TARDAST A., BRIANÇON L., MIRHOSEINI S. M.

Piled embankments - Behaviour of geosynthetic basal reinforcement in condition of change of soft soil reaction
ŁOPATKA A.

On the construction rate of geosynthetic-reinforced and pile-supported embankments
MANGRAVITI V.

Lessons learned from the ASIRI+ project on the use of geosynthetics in load transfer platform
NANCEY A., BRIANÇON L.

16:30 - 17:45

Session 2C - Reinforcement applications (2)

Session chairs: ALZATE A. M., KOLLIOS A.

Microgrid reinforcement of scaled railway ballast
ANJOS R., NETO V., PINHO-LOPES M., POWRIE W.

Geogrid-stabilized eco-friendly aggregates for pavement base – quantitative assessment using bender element sensor technology
WANG H., KO H., KANG M., TUTUMLUER E., SHOUP H.

Experimental studies on the cyclic behaviour of reinforced unbound railway base courses
BRÄUNIG C., HERLE I., WEISEMANN U.

Compaction of a geotextile-reinforced sand contaminated with tyre microplastics
OZHAN H., YAVUZ M.

Ensuring the stability of high embankments on Ukrainian highways during reconstruction and repair using geosynthetic materials
GAMELIAK I., ZHURBA G., DIAKOVSKA T.

14:15-16:00

Session 1D - Design and Modelisation (1)

Session chair: JENCK O.

Effects of grains characteristics and geogrid shape and rigidity on the behavior of reinforced granular soil – 3D DEM study

EL AYOUBI A., EMERIAULT F., VILLARD P., SIBILLE L.

Laboratory tests and numerical studies of a geosynthetic reinforced pile-supported embankment

HU Y., BRIANÇON L., DIAS D.

Strength prediction models for fiber-reinforced soils under effective stress triaxial compression testing

BANTRALEXIS K.E., VASSOU A.G., MARKOU I.N.

Geosynthetic overlap for reinforced piled embankment : centrifuge modelling

THOREL L., GUEROIS M., DUBREUCQ Th., BLANC M.

Finite element modelling of geogrids in stabilisation function - comparison study

RIA ZAMARA K., LEES A., GORRILL B., KAWALEC J.

Numerical modelling of soil-reinforcement direct shear test with Mohr-Coulomb plasticity

XIAO S., DAMIANS I. P., HU W.

Prediction of rainfall induced geosynthetic-reinforced slope instability: machine learning algorithms perspective

JAMEI M., SELMI M., HAMROUMI F.

16:30 - 18:00

Session 2D - Design and Modelisation (2)

Session chair: JAMEI M.

Reinforced platforms with geocells over tree root protection zones for the construction of an elevated woodland walkway

TAHIR M., BERNARDINI P., SAEED R.

Comprehensive overview of soil erosion control: design of anti-erosive geomats for effective slope stabilization

SANTOLI F.M., LUGLI G., TROVATO F.

Impact of structural intersections on reinforced soil structures: design and construction considerations

MASOLA F., TROVATO F., BROCCA G., VICARI M.

Numerical modelling of MSE walls subjected to strong earthquake motions

KORINI O.

Attenuation of environmental vibrations using geosynthetics

HERAULT A., JEAN P., JOLIBOIS A.

A numerical assessment of the influence of compaction on the seismic performance of
Geosynthetic-Reinforced Earth retaining walls
GAUDIO D., CIOFFI L., MASINI L.

Wednesday 17th September

8:30-9:30

Keynote Lecture : WATN ARNSTEIN

Geosynthetics in the Northern countries: geotechnical and environmental challenges
WATN A., HOFF I.

14:00-15:00

LMNS Lecture : MORACI NICOLA

Suitable design approaches for interfaces involving geosynthetics under various loading and
flow conditions

MORACI N., CARDILE G., PISANO M., CARRUBBA P., CLORINDA MANDAGLIO M., BILARDI S,

ROOM 2.3+2.4

9:30-10:45

Session 3A - Sustainability and Durability (3)

Session chairs: RIOT M., STOTZ G.

Reuse and recycling of geosynthetics – Insights into an interdisciplinary research project for a
circular economy

DEPENBROCK N., HEIMBECHER F., FLAMME S., EBBERT S., TAZL M.

Towards a collaborative circular European geosynthetic economy

DENOO F., DE MEYER S., ZAMORA S.

Recycling of geotextiles: a collaborative approach to enhance circularity in construction

GROEN G., GRUBER J.

Simple constitutive methods to represent the tensile response of a laboratory-aged nonwoven
geotextile

PAULA A. M., CARNEIRO J.R., PINHO-LOPES M.

Investigation of durability of geotextiles tubes in marine conditions

*CHEW S. H., SOH J. M., LIM Y. M., DENG J., TAN Y.G., YIM A., QUEK A., LIM D. J., LOW S., CHANG
D.*

11:15 - 12:45

Session 4A - Mandatory European Framework for Geosynthetics – Beyond Sustainability

Session Chairs: von MAUBEUGE K., DELMAS P.

Construction Products Regulation: environmental approach for geosynthetics
DELMAS Ph.

On going Work on the Mandatory requirements for geosynthetics
von MAUBEUGE K.

Geosynthetics - Assessment of Release of dangerous substances
HEILI V.

Geosynthetics - Environmental performance – product category rules
HENNING H.

Geosynthetics - Circular Economy – requirements: materials and products
FONTANA F.

Geosynthetics - Potential release of microplastics
FRASER I.

Discussions
von MAUBEUGE K.

Summary and conclusions
DELMAS Ph.

15:00 - 16:30

Session 5A - Sustainability and Durability (4)

Session Chairs: VAN SCHOORS L., GRIWELL F.

Long-term durability of HDPE geomembranes in mining: A non-parametric statistical approach
URASHIMA B. M., INUI T., DELEON L., RIBEIRO DUARTE A., URASHIMA D., SANTOS R.

Durability assessment of HDPE geomembrane in a concrete water supply canal: A 10-year case study
URASHIMA B. M., INUI T., DELEON L., CARVALHO URASHIMA D., MEUCCI D.

Comparative performance evaluation of smooth and textured white geomembranes under UV exposure
APARICIO-ARDILA M. A., LINS DA SILVA J.

Service life of bituminous geosynthetic barrier: accelerated ageing tests
HAHN W., KROH R., ZANZINGER H., ARMANI A., BREUL B., DOLEDEC E.

Durability of three PVC-P geomembranes during two years of accelerated ageing laboratory tests
STOLTZ G., AUBRIET J., BAMBARA G., SAUGER L., CHAMOLEY D., BOUTEILLE S.

Aging of PVC geomembranes for dams: monitoring of aging and end of service life
BORY O., CINTRACT J., MARTIN L.

17:00 - 18:15

Session 6A - Sustainability and Durability (5)

Session Chairs: APARICIO ARDILA M., ABDELOUHAB A.

Determination of the reduction factors applied to polymeric coated woven steel wire mesh reinforcement according to German recommendation
MASOLA F., GUALANDI P., RIMOLDI P., SCHILLER P., VICARI M.

Durability analysis of High-Density Polyethylene geomembrane immersed in brine and tailings solutions
PAULSON S.

25 years of experience with a lysimeter system with geosynthetic clay liners
MULLER -KIRCHENBAUER A., EHRENBURG H.

Evolution of recycled construction aggregates (RCA) pH and its compatibility with geosynthetics
ABDELOUHAB A., NANCEY A., JANSE D.

Long-term performance of pet geogrids with LLDPE coating in alkaline conditions
LUGLI G., NAPOELONIE Q., SCOTTO M.

ROOM 3.5+3.6

9:30-10:45

Session 3B - Testing, Quality (3)

Session Chairs: SZULC H., AURAY G.

Laboratory investigation of geopolymer stabilized subgrade soil reinforced with Alkaline binder-coated Natural Jute Sheet
AAQIB A., SYED M., MUBASHIR A., UMAIR A.

Laboratory tests of the impact of stones on geotextile and calculation model
BEZUIJEN A.

Study of installation of prefabricated vertical drain through a geotextile tube bund
SOH J. M., CHEW S. H., LIM Y. M., DENG J., TAN Y. C., YIM A., QUEK A., LIM D. J., LOW S., CHANG D.

Interaction properties between cohesive soils and woven geotextiles – experimental and numerical analysis
SERBULEA M.-S.

Simulation and applicability evaluation of nonwoven geotextile composite for adsorption of cesium ions in radiation-contaminated soil
JEON H.Y., NAM G., CHA J.H.

11:15 - 12:30

Session 4 B- Testing, Quality (4)

Session Chairs: BACKES A.-L., BEZUIJEN A.

Geosynthetic Clay Liners, why hydraulic conductivity (k-value) is the wrong value for a tender
EHRENBURG H., NIEHUES C.

Parameters affecting the vertical deformations of GCLs during hydraulic conductivity tests
DEMIRCI N., ÖZDAMAR KUL T., ÖREN A. H.

Hydraulic conductivity of geosynthetic clay liner containing polymerized bentonite with low mass per unit area

ÖREN A. H., AYTEKIN T. C.

Semi-permeable membrane behaviour of conventional and enhanced Geosynthetic Clay Liners
BERNARDO D., DOMIZI J., FRATALOCCHI E., MAZZIERI F.

Laboratory procedures for the modification of soluble and exchangeable cations of geosynthetic clay liners

GUARENA N., MAZZIERI F., DOMINIJANNI A., FRATALOCCHI E., MANASSERO M.

15:00 - 16:30

Session 5B - Hydraulic applications (1)

Session Chair: OZHAN H.

Issues of steep sideslope liners that remain exposed and are later covered
THIEL R.

Performance of geosynthetics in methane oxidation systems

DI BATTISTA V., FILION S., CABRAL A.

Gas capture and extraction using multi-linear drainage composite

BANNOUR H., BEAUMIER D., FOURMONT S.

Feedback on the long-term integrity of multi-linear drainage geocomposites installed on landfill final covers after 10 and 12 years of operation

RIOT M., CIUPERCA C., SAUNIER P., FOURMONT S.

Installation of geosynthetics at the Cerro do Lobo Tailings Storage Facility

BARROSO M., MANSO J., BRITO A., MARCELINO J., GALRAO R., OLIVEIRA M.

Raising waste storage facilities-design in line with the latest French recommendations

FAYE C., ABDELOUHAB A.

17:00 - 18:15

Session 6B - Hydraulic applications (2)

Session Chairs: BARROSO M., MORACI N.

First innovative and sustainable GCL-application in Dutch flood defence at Beesel

GERRITSEN R., BARDOEL J.W., DORST K., MEERKERK J.

Benefits in cost and environment for channel revetment with geocells
CARESSATO JUNIOR W., FIERRO G.

Central quay, Cardiff - regenerated concrete river bank
BERNARDINI P., GUERRA-ESCOBAR P., SAEED R., TAHIR M.

Innovation in reservoir design with bituminous geomembranes (BGM)
DALY N., DOLEDEC E., AGUIRRE T., ~~ESCOBAR E.~~

Climate resistance of GCL-reinforced sealing systems based on lysimeter testing
NIEHUES C., VOLLMERT L.

ROOM 3.8 LE LOUNGE

9:30-10:45

Session 3C - Reinforcement applications (3)

Session Chairs: *PINHO-LOPES M., TUTUMLUER E.*

Enhanced evaluation methodology for asphalt reinforcement: methodological updates and laboratory testing protocols
SADEGHIAN M., VROMANS E., AURAY G.

Geogrids in road applications for mitigating reflective cracking: A case study from Portugal
NEVES J., CAETANO F., BEJA C.

Comparative analysis of thermal and mechanical degradation in glass fiber and PVA geocomposites in asphalt pavement
CASTRO DOS SANTOS P.J., DOS ANJOS E MELLO M., ALEXANDRE NUNES DE FRANÇA F., CLAUDIO MARQUES SILVA JÚNIOR F., FERNANDES AMORIM Ê.

Evaluation of geotextiles' stiffening function using accelerated pavement testing
SICHA G.

Instrumentation of geogrids using novel non-invasive electrical sensing
SHARP T., MIAS C., ZAMARA K., FOWMES G.

11:15 - 12:15

Session 4C - Reinforcement applications (4)

Session Chair: *HORNICEK L.*

Use of asphalt interlayer multiaxial geocomposite to enhance an asphalt overlay fatigue performance and bottom-up cracking prevention in motorway rehabilitation project
GOLOS M., KORNACKA K., KAWALEC J.

Influence of different paving geosynthetics on crack growth phases and strain behaviour in asphalt overlays
CORREIA N.S., BERNARDINELLI A.L.C.S., SANTOS K.M., SHAHKOLAH A.

Steel geogrids performance and environmental impact in asphalt reinforcement
AURAY G., MEKKAOU A.

Application of geosynthetics in linear concrete pavements improved by adding carbon nanotubes CNTs

ABDESSEMED M., OUADAH N.

15:00 - 16:30

Session 5C - Reinforcement applications (5)

Session Chairs: MANGRAVITI V., THIEL R.

Stabilisation and bearing capacity improvement of granular platform

NANCEY A., ABOU CHAZ N., BRIANÇON L., VILLARD P., SILVANI C.

The role of mechanically stabilized base on the performance of top asphalt layer

HORNÍČEK L., RAKOWSKI Z., KAWALEC J., POSPISIL J.

Research on geogrid stabilisation of paved and unpaved roads

LUGLI G., RIMOLDI P., SPADARO G., TROVATO F.

Case studies of use of multiaxial stabilisation geogrids in heavy duty pavements

MAZUROWSKI P., ZAMARA K.

Advanced multi-composite products for road stabilization: a comparative design and LCA analysis

TROVATO F., PUTHIYA V. J., LUGLI G., RIMOLDI P.

Refinement of the design method for geogrid stabilisation of railway ballast and subballast

RIMOLDI P., TROVATO F.

17:00 - 18:15

Session 6C - Reinforcement applications (6)

Session Chairs: VAN EEKELEN S., RIMOLDI P.

Design of GRS bridge abutment using river debris as backfill material

LENART S., KARUMANCHI S. R.

Design and construction of non-load bearing reinforced soil bridge abutments for high speed two to span over large diameter sleeve columns

DALWADI M., PERDIKOU S., DOULALA-RIGBY C., KAWALEC J.

History and performance of the first MSE walls reinforced with polymeric strips in Türkiye

OZCELIK H.

Influence of different construction methods on full-height precast facing reinforced soil walls

MALEKMOHAMMADI K., DAMIANS I.P.

The stabilisation of a cut slope utilising percussion driven earth anchors

HARRIS E.

9:30-10:45

Short Course on geosynthetics in French

11:15 - 12:30

Session 4D - French session

Session Chair : VARAIN K.

Géosynthétique haute performance et recyclable pour la stabilisation et le renforcement de plateforme

NANCEY A., ABDELOUHAB A.

Effets d'un vieillissement en environnement saturé sur les propriétés fonctionnelles des géotextiles en chanvre

DABIRET S. A., ROURE, F., FARCAS F., MAKKI L., MAILLER P., REIFFSTECK P., VAN SCHOORS L.

Techniques de renforcement par géosynthétiques d'un glissement de terrain

KHELIFI M., ZERMANI M.

Vieillissement des géomembranes en PVC utilisées dans les barrages : suivi du vieillissement et de la fin de durée de vie

BORY O., CINTRACT J., MARTIN L.

Amélioration de la portance d'une plateforme par inclusion de nappes géosynthétiques

CHERIFI F., TABTI S.

15:00 - 16:30

Session 5D - French session

Session Chairs : FARCAS F., MAGNAN J-P.

Réhausse des installations de stockage des déchets (ISD) – conception selon les dernières recommandations françaises

FAYE M.C., ABDELOUHAB A.

Utilisation des géosynthétiques dans le cadre des travaux de « digues » du site pilote écrêteur de crue Seine-Bassée

VALENZIANO A., LAUGIER P.

Amélioration des sols par inclusions rigides et apport des géosynthétiques

HAMIDECHI BOULMAALI T., TABTI S.

Effets des caractéristiques des grains et de la forme et rigidité des géogrilles sur le comportement des sols granulaires renforcés – étude DEM 3D

EL AYOUBI A., EMERIAULT F., VILLARD P., SIBILLE L.

Recouvrement des géosynthétiques pour remblais sur pieux renforcés : modélisation en centrifugeuse

THOREL L., GUEROIS M., DUBREUCQ Th., BLANC M.

Modélisation numérique des murs renforcés mécaniquement soumis à de fortes sollicitations
sismiques
KORINI O.

17:00 - 18:15

Session 6D - Case study competition

Thursday 18th September

9:00-10:00

Keynote Lecture : BRIANÇON LAURENT

Geosynthetic reinforced soil : from the experimentation to design methods

BRIANÇON L.

ROOM 2.3+2.4

10:30 - 11h45

Session 7A - IGS TC Sustainability

ROOM 3.5+3.6

10:30 - 11h45

Session 7B - Testing and Quality (5)

Session Chairs: TROVATO F., NANCEY A.

Comparing continuous filament and staple fibre geotextiles for geomembrane puncture protection

ALBERTYN M.

Experimental investigation of a PVC geomembrane response to different tensile loading modes

AKEL N., JOSSEAUME L., STOLTZ G., WAUTIER A., TOUZE N., NICOT F.

Internal temperature change of various types of geomembranes subjected to tensile test

TAHIR H., STOLTZ G., AKEL N., VEYLON G., PEYRAS L.

Effect of tensile load and temperature on bituminous geomembrane seams

BLOND E., GIROUD J.-P., SCHEIRS J.

Performance testing of strained BGM welds

KENDALL P., LLINAS P., HETTIHEWAHE M.

ROOM 3.8 LE LOUNGE

10:30 - 11h45

Session 7C - Reinforcement applications (7)

Session Chairs: ZAMARA K., LENART S.

Oosterweel connection - optical fiber monitoring of a 17 meter high reinforced fill structure

DENIES N., VAN BREUSEGEM M., COUCK J., VAN DER PLOEG J., LAUWERS N., DE MAESSCHALK S., MASOLA F., RUIGROK J.

Geometric changes of reinforced soil walls: monitoring and impact on facing conditions during construction and using stage

MACHOWSKI M.

Numerical study on the performance of reinforced fill structure using marginal fill

KHAN A.R., DI EMIDIO G.

Green vegetated reinforced soil wall with geogrid and site won materials for Raleigh park, Barnstaple, U.K.

SAEED R., GUERRA-ESCOBAR P., BERNARDINI P., TAHIR M.

Slope protection using geosynthetic materials-a case study on the graveyard complex of mataram royal king

NURJANNAH D.A., ANINDITA N.A., HARNINTO D.S., BADRIZA A.SUBAGJA J.

Grand Théâtre

10:30 - 11h45

Session 7D - Design and Modelisation (3)

Session Chairs: L. CARBONE, P. VILLARD

Seismic performance of reinforced soil walls on the Big Almaty Ring Road in Kazakhstan

KUZNETSOVA A., ORLOV E., PARK S.

Selection of intensity measures for displacement prediction of geosynthetic reinforced soil walls under seismic loading

CENGIZ C., KILIC I.E., GULER E.

Effects of density of geofoam cushion on seismic performance of the retaining wall: experimental study

EDINÇLILER A., DEMIRTAS B.S.

Design method for combined geocell and geogrid stabilisation of paved roads

RIMOLDI P.

11:45-12:30

Closing Ceremony in Grand Theatre