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NGM 2020 VIRTUAL CONFERENCE

Nordic Geotechnical Meeting

18–19 January 2021, Virtual Conference ngm2020.com

ON DEMAND PRESENTATIONS

160 km piles in Olskroken, Gothenburg - Optimization and automation of pile design for bridge support in soft soil

Mr **Robin Vervoorn** Civil7, Mr **Ibrahim Rashid** WSP Sweden

Anchoring of a retaining structure with glass fibre strand anchors

Ms **Kirsten Malte Iversen** COWI A/S, Mr **Søren Juel Christensen** Aarsleff,
Mr **Ole Møller** Aarsleff

Aquifer Thermal Energy Storage, ATES, used for district cooling in a new urban development in Hillerød, Denmark

Mr **Lars Møller Markussen** Ramboll Denmark, Mr **Jes Michaelsen** Ramboll Denmark

Benefits of full scale test road embankment as a part of alliance project – Case Main road No 12 Valtari alliance

Mr **Niko Asikainen** Skanska Infra OY, Mr **Teemu Röman** Pöyry Finland,
Mr **Veli-Matti Uotinen** Finnish Transport Infrastructure Agency

Climate adaption measures of the Great Belt Link in Denmark to future-proof key national infrastructure asset

Mr **Jan Stæhr** COWI A, Mr **Jørgen Krogh** COWI AS

Correlation between CBR value and effective strength parameters for engineered fills

Mrs **Marta Weber** COWI A/S, Dr **Michael R. Lodahl** COWI A/S,
Mr **Kristian T. Brødbæk** COWI A/S, Dr **Caspar T. Leth** COWI A/S

Dualism of geology and geotechnical engineering: two parallel approaches to define lake water infiltration into an interlobate esker

Dr **Juho Mansikkamäki** Pöyry Finland, Dr **Niko Putkinen** Geological Survey of Finland,
Dr **Arto Hyvönen** Geological Survey of Finland,
Dr **Hilkka Kallio** Geological Survey of Finland

Experimental evaluation of time effect on swelling pressure in high plasticity clay

Ms **Elena Peri** Aalborg University, Dr **Søren Dam Nielsen** COWI,
Mr **Benjaminn Nordahl Nielsen** Sweco, Prof **Lars Damkilde** Aalborg University

Frost monitoring of the Finnish road network

Mr **Taavi Dettenborn** Ramboll Finland Oy, Mr **Ilari Harju** Ramboll Finland Oy,
Mr **Ari Hartikainen** Ramboll Finland Oy, Mrs **Hanna Nykänen** FinMeas Oy,
Dr **Sami Ylönen** FinMeas Oy, Mrs **Kirsi Koivisto** Ramboll Finland Oy

Full geotechnical BIM – a must for urban areas

Dr **Mats Svensson** Tyréns AB, Mr **Olof Friberg** Tyréns AB

Full-scale static compression pile load test in sand with post installation pre-stressing to engage toe resistance

Ms **Kirsten Malte Iversen** COWI A/S, Mr **Bjørn Staghøj Roesen** COWI A/S

Geophysics for increased value of geotechnics in urban areas

Dr **Mats Svensson** Tyréns AB

Ground investigations for new bridge crossing Mjøsa in Norway

Mr **Kristian Heurlin** Multiconsult Norge AS, Mrs **Emmi Charlotte Kristensen** Multiconsult Norge AS, Mr **Anders Berg Ulvestad** Multiconsult Norge, Mr **Steffen Giese** Multiconsult

How Deep Foundations for a 245-metre skyscraper were installed in hard rock and soft clay: Results from a ground engineering case study in Gothenburg, Sweden

Mr **Kevin Hague** Aarsleff Ground Engineering Ltd, Mr **Jan Kreuziger** Aarsleff Norge As

InterCity Østfold: Geotechnical models in a large transport project using AutoCAD Civil 3D

Ms **Kari Lien Johnsen** Multiconsult Norge AS

Large Scale Triaxial testing of Rockfill

Mr **Anders Bjerregaard Christensen** Niras, Mr **Svend Pilgaard Larsen** GEO

LiTuWa-Light weight reinforced walls and steep slopes with geosynthetics

Mr **Arnstein Watn** Norwegian University of Science and Technology,
Mr **Jomar Finseth** Geofield, Mr **Jon Hauge** Leca Norge AS

Optimisation of foundations for Highrise buildings in Gothenburg soft clay

Mr **Anders Sagemo** Ramboll Sweden AB, Dr **Tara Wood** Ramboll Sweden AB,
Mr **Carsten Lyse** Rambøll Denmark

Practical aspects of grouted soil anchorage — A case study on rehabilitation of a quay in Oslo, Norway.

Dr **Girum Yesuf** Norconsult AS, Mrs **Andrea Støren** Norconsult AS,
Mr **Trond Føyn** Norconsult AS

Railway at Svendborg

Mr **Per Laursen** Rambøll, Mr **Lars Madsen** Rambøll

Stabilizing a quick clay slope in the city center of Trondheim, Norway

Dr **Anders Gylland** Multiconsult Norge AS, Mr **Sivert Hallsteinsen** Multiconsult Norge AS

Stormwater detention factors for a blue-green roof based on lightweight expanded clay aggregate in Norway

Mr **Jaran Raymond Wood** Leca International

Supporting urban civil works using GeoGIS2020, a software demonstration with examples from recent projects in Copenhagen

Mr **Christian Haugwitz** Rambøll Danmark A/S

Testing sensitive clays through time and length scales

Mr **Georgios Birmpilis** Chalmers University of Technology,
Prof **Jelke Dijkstra** Chalmers University of Technology

Uncertainties in modelling undrained shear strength of clays using Critical State Soil Mechanics and SHANSEP

Dr **Marco D'Ignazio** Tampere University / Ramboll Finland Oy, Prof **Kok-Kwang Phoon** National University of Singapore, Prof **Tim Länsivaara** Tampere University

Impact of installation on the recovery of the bearing capacity of displacement piles in sensitive clay

Dr **Jorge Yannie** (NCC)

Characterization and assessment of crushed limestone powder and its environmental applications

Dr **AHMED ALNUAIM** (King Saud University)

BIM geotechnical

Prof **GENNADII BOLDYREV** (LLC NPP Geotek)

Geotechnical Characterization and Applications of Riyadh Metro TBM Excavated Material

Dr **AHMED ALNUAIM** (King Saud University)

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LIVE PROGRAMME

18th JANUARY

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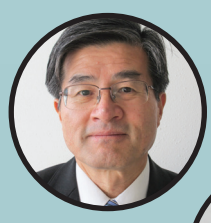

KEYNOTE
Masaki Kitazume

KEYNOTE
Jean-Sebastien L'Heureux

10:00 OPENING SESSION

Chaired by: Leena Korkiala-Tanttu & Juho Mansikkamäki **Stage:** Stream 1

10:00 OPENING

10:15 KEYNOTE MASAKI KITAZUME
Professor of Department of Civil and Environmental Engineering at Tokyo Institute of Technology Japan

10:45 KEYNOTE JEAN-SEBASTIEN L'HEUREUX
Principal Engineer, Norwegian Geotechnical Institute (NGI), Associate Professor, Norwegian University of Science and Technology (NTNU)
On the use of benchmark test sites for research and development in geotechnical engineering

BREAK

11:45	SESSION 1 (NGM)	SESSION 2 (NGM)	SESSION 3 (BSGC)	SESSION 4 (BSGC)
	Case histories **Chaired by:** Tonje Eide Helle **Stage:** Stream 1	**Soil and rock investigations 1** **Chaired by:** Lars Damkilde **Stage:** Stream 2	**Geotechnical art and historical experiences / Design guidelines** **Chaired by:** Lech Balachowski **Stage:** Stream 3	**Transport infrastructure / Foundation engineering and deep foundations** **Chaired by:** Panu Tolla **Stage:** Stream 4
11:45	**Prediction of jet grouting diameter in Swedish soil conditions** **MR. MÅRTEN BRINCK** (ELU Konsult AB), **Mr. KARL STIGENIUS** (Sweco)	**Shear wave velocity as a tool for characterising engineering properties of Nordic clays** **DR. MARCO D'IGNAZIO** (Norwegian)	**Foundations for light structures** **MR. VILLU LEPPIK** (Estonian University of Life Sciences)	**Towards the modelling of uplift resistance of skirted shallow foundations** **DR. ANTENEH BIRU TSEGAYE** (Multiconsult AS)
12:00	**Dynamic compaction of the Baltic basin silty Sand - quality assurance with CPT, DPM, DMT and PLT** **MR. PETERIS SKELS** (Riga Technical University; Ltd. Menard Baltic)	**Airborne geophysical investigations for landslide risk investigation along the Ångerman River, central Sweden** **MS. ULRIKA ISACSSON** (Swedish Geotechnical Institute),	**Numerical analysis of the effect of underpass construction on an existing bridge foundation** **DR. AHMED ELGAMAL** (Mans)	**Detection of defects in bored piles by non-destructive methods on lrt construction site** **PROF. ASKAR ZHUSSUPBEKOV** (Eurasian National University, Astana, Kazakstan),
12:15	**3D stability analyses of Skjeggestad landslide** **DR. SUZANNE LACASSE** (Norwegian Geotechnical Institute)	**CPTU results at a silt test site in Norway: effect of cone penetrometer type** **DR. PRISCILLA PANIAGUA** (Norwegian Geotechnical Institute)	**Influence of construction fence of deep excavation of the large sizes on changes of mechanical and strength characteristics of the soils basis** **PROF. RASHID MANGUSHEV** (Saint Petersburg of State University of architecture and civil engineering)	**Advances in Quality Control Methods for Bored Pile and Diaphragm Wall Foundations with Case Histories** **Mr. PATRICK HANNIGAN** (GRL Engineers, Inc.), **Mr. GEORGE PISCSALKO** (Pile Dynamics, Inc.)
12:30	**Risk management and risk acceptance regarding the stability of slopes: Case study** **MR. ANDERS BEIJER LUNDBERG** (ELU Konsult AB)	**Using SHANSEP for verification of unreliable CPTU data in clays** **DR. MARCO D'IGNAZIO** (Tampere University / Ramboll Finland Oy)	**Do the standards need modifications? A proposal for geotechnical stability safety factor of breakwater** **MR. RAF SOMERS** (IMDC)	**Railway Infrastructure in Kolarctic Region** **DR. ELENA GORODNOVA** (Emperor Alexander I St. Petersburg State Transport University)
12:45	**City planning of Hermanninranta - combination of geotechnics, contamination and climate change** **MRS. MIIA PAATSEMA** (Helsinki City)	**Clay content determination with Hydrometer and Laser Diffraction Method** **MRS. ALEJANDRA LOPEZ RAMIREZ** (Aalto-University)	**Underground car parks: Design guidelines for steel solutions and Circular economy – Dutch experience** **MR. JOÃO MARTINS** (ArcelorMittal Commercial RPS Sàrl)	
13:00		**The effect of input ground motion location on design spectrum in a seismic ground response analysis performed for an alluvial site** **MRS. BURCU AYTEKIN** (Bursa Uludag University)		

BREAK

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14:15	SESSION 5 (NGM)	SESSION 6 (NGM)	SESSION 7 (BSGC)	SESSION 8 (BSGC)
	Slope stability and other geohazards **Chaired by:** Steinar Nordal **Stage:** Stream 1	**Soil and rock investigations 2** **Chaired by:** Marco D'Ignazio **Stage:** Stream 2	**Soil and rock investigation 1** **Chaired by:** Lehar Leetsaar **Stage:** Stream 3	**Digital applications in geotechnics** **Chaired by:** Ivan Vanicek **Stage:** Stream 4
14:15	**Large deformation failure analysis of slopes using the smoothed particle finite element method** **DR. JINGJING MENG** (Luleå University of Technology)	**Evaluation of fast field vane tests FVT-F** **MR. JAN DANNEMAND ANDERSEN** (GEO)	**Shaft friction from the DMT and direct shear interface tests** **PROF. LECH BALACHOWSKI** (Gdańsk University of Technology (GUT))	**Inspection of open-pit mine drainage characteristics with a horizontal borehole camera** **MS. CRISTHIANA PERDIGAO** (Federation University Australia)
14:30	**Effect of Strength Anisotropy on the Stability of Natural Slopes** **PROF. GUSTAV GRIMSTAD** (Norwegian University of Science and Technology)	**The geotechnical characterisation and foundation design of the Fjord Link Frederikssund bridge in Denmark** **MR. FRANCESCO PETRELLA** (Ove Arup & Partners Danmark)	**Effect of spatial variability of soil properties on permanent seismic displacements of slopes with uniform load** **DR. NIKOLAOS ALAMANIS** (University of Thessaly)	**Role of Geotechnical Engineering in BIM process modelling** **PROF. IVAN VANICEK** (Czech Technical Univeristy in Prague)
14:45	**Stability of the Gunneklev Fjord sediments** **MR. SIGBJØRN RØNNING** (Norwegian Geotechnical Institute)	**Characterization in one-dimensional compression of a Danish Paleogene Clay** **MS. GIORGIA DI REMIGIO** (Technical University of Denmark)	**Statistical evaluation of physical and index properties of Vistula Marshlands deltaic soft soils** **DR. JAKUB KONKOL** (Gdańsk University of Technology (GUT))	**Determining the subgrade reaction modulus. Mathematical approach on case study.** **MR. NAGY ANDOR** (Technical University of Cluj-Napoca)
15:00	**Investigations on load-bearing behavior of soil nailing combined with flexible facing for slope stabalization** **MR. JULIAN LEHN** (GTU Ingenieurgesellschaft mbH)	**Improving identification of a significant soil layer from CPTU combined with acoustic data** **DR. SAMSON DEGAGO** (Norwegian Public Roads Administration)	**Tensile strength of cement treated clay** **MR. AZNEB ABDUL SALAM** (Indian Institute of Technology Madras)	
15:15	**Subjective determination of the undrained shear strength in slope stability assessments** **MS. LOUISE LARSSON** (ELU Konsult AB), **MR. WIK BREURE** (ELU Konsult AB)	**Geotechnical characterization of Norwegian peat: database** **DR. PRISCILLA PANIAGUA** (Norwegian Geotechnical Institute, Norwegian University of Science and Technology (NTNU))	**Analysis on technological features of pile foundations construction in frozen and seasonal thawing soils** **MRS. AINUR MONTAYEVA** (L.N. Gumilyov Eurasian National University)	
15:30			**Extent of geotechnical site investigations for buildings in Estonia** **MR. LEHAR LEETSAAR** (Aalto University and Tallinn Univesity of Technology)	

BREAK

16:15	SESSION 9 (NGM)	SESSION 10 (NGM)		SESSION 11 (BSGC)
	Climate change and circular economy **Chaired by:** Þorbjörg Sævarsdóttir **Stage:** Stream 1	**Eurocode and standardization** **Chaired by:** Ville Lehtonen **Stage:** Stream 2		**Soil and rock investigations 2** **Chaired by:** Wojciech Pula **Stage:** Stream 4
16:15	**Investigations into stabilized structures with the use of waste foundry sand** **MR. TOMMI SAPPINEN** (Aalto University), **MR. MIKKO VILENIUS** (Aalto University)	**Tension tests on bored instrumented piles installed in marine Eocene clay** **MS. JANNIE KNUDSEN** (Aarhus University and COWI), **DR. KENNY SØRENSEN** (Aarhus University)		**Preliminary study of a bridge abutment settlement considering spatial variability of soil properties** **PROF. WOJCIECH PULA** (Wrocław University of Science and Technology)
16:30	**Strength and stiffness properties of stonewool used as cloudburst reservoir under roads** **DR. NIELS TRADS** (GEO)	**Eurocode 7 – an updated framework to ensure reliable geotechnical solutions** **DR. GUNILLA FRANZÉN** (GeoVerkstan)		**Formulation of new stress-dilatancy relations for the modelling of rocks and rock masses** **DR. ANTENEH BIRU TSEGAYE** (Multiconsult AS)
16:45	**Laboratory evaluation of electrokinetic dewatering of dredged marine sediment as an option for climate change adaption** **DR. MONA MALEKZADEH** (Southern Cross University)	**Eurocode EN1991 traffic load for geotechnical design** **MR. PANU TOLLA** (FTIA), **MR. KIM ANDERSSON -BERLIN** (Arcus)		**Case study of pullout piles connected with cap** **DR. ŠARŪNAS SKUODIS** (Vilnius Gediminas technical university)
17:00	**Life cycle assessment and life cycle cost analysis for geotechnical engineering: review and research gaps** **DR. JOHAN SPROSS** (KTH Royal Institute of Technology)			**Models for predicting the suction of heaving compacted soils using geotechnical properties** **MR. ARMAND AUGUSTIN FONDJO** (Central University of Technology, Free State)
17:15	**Laboratory and field investigation of cement-stabilized organic soil for establishing a water retaining structure near a flood- prone area** **MR. CHRISTOPHER GERLACH** (GEO), **DR. NIELS TRADS** (GEO)			**Seismic Response of Mechanically Stabilised Earth Retaining Wall** **MS. MONICA JOSEPH** (i), **DR. SUBHADEEP BANERJEE** (Indian Institute of Technology Madras)
17:30	**Emission reduction through preconstruction and utilization of alternative materials in infra construction projects** **MS. SAILA PAHKAKANGAS** (Ramboll Finland Oy)			

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10:00 SESSION 12 (NGM)

Modelling / Monitoring and digital solutions

Chaired by: Sami Ylönen **Stage:** Stream 1

10:00 **InSAR monitoring data to assess building response to deep excavations**
DR. STEFAN RITTER (Norwegian Geotechnical Institute)

10:15 **Modelling the railway induced ground vibrations in soft soil areas of Western Finland**
MR. ANTTI PELHO (AFRY Finland Oy)

10:30 **DNU. The New Universitu Hospital at Aarhus**
MR. PER LAURSEN (Rambøll)

10:45 **KEYNOTE MINNA KARSTUNEN**
Chalmers
From soft soil modelling to engineering application

SESSION 13 (BSGC)

Environmental Geotechnics and recycling 1

Chaired by: Sarunas Skuodis **Stage:** Stream 4

KEYNOTE TARMO SOOMERE
Signatures and impacts of climate change in coastal environments of the Baltic Sea and affiliations

Swell-shrink and hydraulic behaviour of compacted red soil- bentonite mixtures
MS. DEVAPRIYA A.S (Indian Institute of technology Madras)

BREAK

12:00 SESSION 14 (NGM)

Ground improvement methods

Chaired by: Leena Korkiala-Tanttu **Stage:** Stream 1

12:00 **Quick-clay landslide mitigation using potassium-chloride wells: Installation procedures and effects**
DR. TONJE EIDE HELLE (Multiconsult)

12:15 **Settlements of spread footing foundations on quick clay stabilized with lime and cement**
MR. EIVIND JUVIK (Norwegian Public Roads Administration)

12:30 **Full-scale field-testing of lime-cement columns in a very sensitive clay**
MR. ALF KRISTIAN LUND (Norwegian Geotechnical Institute)

12:45 **Influence factors for using hydraulic binders for soil stabilisation of fine-grained soils in cold environment**
MRS. MIRJA ROTHHÄMEL (Luleå University of Technology)

13:00 **Observations from Reverse Column Penetration Tests (RCP) on Lime-cement Columns in Klett, Trondheim, Norway**
MR. BJØRN KRISTIAN FISKVIK BACHE (Norwegian Geotechnical Institute)

13:15 **Light foam glass, stable tree piles: A case study from a successful road re-construction project**
MR. EHSAN ELHAMI (WSP Sweden)

SESSION 15 (NGM)

Soil and rock investigations 3

Chaired by: Minna Leppänen **Stage:** Stream 2

Estimating shear wave velocity with the SCPTu and Bender element
MR. SIGURDUR VALSSON (Norwegian Public Roads Administration), **MRS. MARIANNE DAHL** (Norwegian Public Roads Administration), **MR. EIGIL HAUGEN** (Norwegian Public Roads Administration), **DR. SAMSON DEGAGO** (Norwegian Public Roads Administration)

Strength and deformation characterization of Norwegian organic cohesive soil (gyttja)
MR. ØYSTEIN BUEIE HOLSTAD (Norwegian Public Roads Administration)

Airborne geoscanning and efficient geotechnical ground investigation workflows: A road-building case study from Central Norway
MR. CRAIG WILLIAM CHRISTENSEN (EMerald Geomodelling)

Measurement uncertainty of the fall cone (FC) test
MR. MIKA KNUUTI (Tampere University)

Random sampling of geosynthetics in Finland
MRS. MINNA LEPPÄNEN (Tampere University)

SESSION 16 (NGM)

Foundations and deep excavations 1

Chaired by: Mirva Koskinen **Stage:** Stream 3

Penetration of driven piles into pre-crushed blasted rock: Case Jätkäsaari
MS. KRISTIINA VASILOPOULOS (Aalto University)

Bispevika – Developing a new district in Oslo harbor area, Mitigating horizontal forces in an area with challenging ground conditions
MR. MARTIN DONS (Multiconsult Norge AS)

Experience from short- and long-term performance of deep excavations in soft sensitive clays
MR. JOHANNES TORNBORG (Chalmers University of Technology & Skanska Sverige AB)

Effect of de-icing salt as winter maintenance for corrosion of steel piles on bridges
MR. VELI-MATTI UOTINEN (Finnish Transport Infrastructure Agency)

SESSION 17 (BSGC)

Environmental geotechnics and recycling 2

Chaired by: Miia Paatsema **Stage:** Stream 4

Deep compaction of crushed concrete fill, full-scale test at Jätkäsaari, Helsinki
MS. SANNA ANTTILA (Ramboll Finland Oy)

Case Vilhonvuorenkatu, building a new street and tram connection through old Suvilahti gas plant site
MRS. MIIA PAATSEMA (Helsinki City)

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14:30	SESSION 18 (NGM)	SESSION 19 (NGM)	SESSION 20 (NGM)	SESSION 21 (BSGC)
	Transport infrastructure Partnered by Leca **Chaired by:** Aldís Ingimarsdóttir **Stage:** Stream 1	**Statistical methods, risk analysis and reliability based design** **Chaired by:** Johan Spross **Stage:** Stream 2	**Foundations and deep excavations 2** **Chaired by:** Sven Knutson **Stage:** Stream 3	**Design experiences and theoretical solutions** **Chaired by:** Sascha Henke **Stage:** Stream 4
14:30	**TBM-spoil – spoil characterization and utilization at the Follo Line project** **DR. JENNY LANGFORD** (Norwe), **MS. MARIANNE DAHL** (Statens vegvesen)	**CPTU-based settlement modelling for Kujala test embankments on overconsolidated silty clay: A probabilistic approach** **MS. MONICA LÖFMAN** (Aalto University)	**Developments in the field of removable anchors** **DR. MATTHIAS J. REBHAN** (Graz University of Technology)	**Data Analysis and Prediction of Ground Vibrations due to Deep Vibro Techniques** **MR. WILLIAM CHONG** (Keller Foundations Pte Ltd)
14:45	**Applications of Lightweight Aggregate Fill in Railway Construction** **MR. TAAVI DETTENBORN** (Ramboll Finland Oy)	**In-situ ballast condition determination by tamping machine integrated measurement system** **MRS. OLJA BARBIR** (TU Wien)	**Model study of screw pile installation impact on ground disturbance and vertical bearing behaviour in dense sand** **MR. MUHAMMAD AZHAR SALEEM** (Saitama University)	**The design of geotechnical structures using numerical methods** **PROF. SASCHA HENKE** (Helmut Schmidt University, University of Federal Armed Forces Hamburg)
15:00	**Transport infrastructure and geotechnical engineering: ELGIP position paper** **DR. PRISCILLA PANIAGUA** (Norwegian Geotechnical Institute), **DR. JEAN- SEBASTIEN L'HEUREUX** (Norwegian Geotechnical Institute)	**Towards rigorous boundary value level sensitivity analyses using FEM** **MR. HOSSEIN TAHERSHAMSI** (Chalmers University of Technology)	**Vibrations from driven concrete piles in layered soft soils close to a railway embankment** **DR. MICHAEL R. LODAHL** (COWI A/S)	**A numerical assessment of jetty side support system** **DR. AHMED ELGAMAL** (Mansoura Higher Institute of Engineering and Technology)
15:15		**A management tool to reduce the risk of damage caused by geotechnical groundworks** **DR. LUCA PICIULLO** (Norwegian Geotechnical Institute)	**New Munch Museeum in Oslo – Challenging foundation engineering & construction in complicated ground conditions** **MR. ANDERS BERG ULVESTAD** (Multiconsult)	**Innovation, Disruption, and Opportunity in Reinforced Soil Structures** **DR. PETER HOFFMAN** (University of Colorado Denver)
15:30		**New Hospital in Nordsjælland.** **MR. LARS MADSEN** (Niras)	**Permanent uplift anchors in Copenhagen Limestone** **MR. BJØRN STAGHØJ ROESEN** (COWI A/S)	
15:45		**Estimating pile length uncertainty with Kriging** **MR. MARTTI HALLIPELTO** (Ramboll Finland Oy)		

BREAK

16:30	SESSION 22 (NGM)	SESSION 23 (NGM)	SESSION 24 (NGM)	SESSION 25 (BSGC)
	Modelling **Chaired by:** Gustav Grimstad **Stage:** Stream 1	**Circular economy / Cold regions - frost** **Chaired by:** Takashi Ono **Stage:** Stream 2	**Foundations and deep excavations 3** **Chaired by:** Jelke Dijkstra **Stage:** Stream 3	**Case studies** **Chaired by:** Juho Mansikkamäki **Stage:** Stream 4
16:30	**Use of a 3D stratigraphic model as tool for improved communication and risk assessment in large infrastructure projects** **MR. MATS KAHLSTRÖM** (Norwegian Geotechnical Institute)	**Recycling of concrete from demolished bridges and other engineered structures** **MR. TAAVI DETTENBORN** (Ramboll Finland Oy)	**BegrensSkade II – REMEDY – Risk Reduction of Groundwork Damage** **DR. JENNY LANGFORD** (Norwegian Geotechnical Institute), **MR. EINAR JOHN LANDE** (Norwegian Geotechnical Institute), **MR. THOMAS SANDENE** (Norwegian Geotechnical Institute)	**Investigations of Soil Plugging in Open-Ended Piles with Respect to the Long-Term Behaviour of the Plug** **PROF. SASCHA HENKE** (Helmut Schmidt University)
16:45	**Numerical modelling of distinct ice lenses in frost heave** **MR. HAO GAO** (Norwegian University of Science and Technology (NTNU))	**State-of-the-art and sustainable solutions for quay wall construction** **MR. JOÃO MARTINS** (ArcelorMittal Commercial RPS Sàrl)	**Back-calculation of pillar foundation for Skjeggestad Bridge** **DR. ROBERT BENDZOVSKI** (Multiconsult Norge AS)	**Geotechnical engineering education in 2020** **MRS. PIRJO KUULA** (Tampere University)
17:00	**Railway embankment behaviour due to increased axle loads - A numerical study** **MR. TAN DO** (Luleå University of Technology)	**A new earth reinforcement by "panel and nail" for slope protection in cold region** **PROF. TAKASHI ONO** (Hokkai-Gakuen University), **MR. NOBUYUKI NISHIO** (Techno Support. co.,Ltd.), **MR. AKIHIKO NAGANUMA** (YAHAGI CONSTRUCTION Co.,LTD.), **DR. HIROHISA MUTO** (YAHAGI CONSTRUCTION Co.,LTD.), **MR. KAZUYA KIRIYAMA** (YAHAGI CONSTRUCTION Co.,LTD.)	**Deep soil mixing for stabilising deep excavations** **MR. ROBIN VERVOORN** (Civil7), **Mr. A.A. SANTOS BARROS** (Delft University of Technology)	**EU LIFE IP CIRCWASTE, case Sampaanala bay: coastal bay mass- stabilization with indstrial by-product-based binder mixtures** **MR. TUOMAS SUIKKANEN** (Ramboll Finland Oy)
17:15	**DSHANSEP: Alternative considerations of the SHANSEP approach** **DR. ANTENEH BIRU TSEGAYE** (Multiconsult AS)	**Suction measurement in freezing soils using pore pressure transducers** **MR. TARUN BANSAL** (Luleå University of Technology)	**Permanent sheet pile walls in complex soil conditions – Surveillance, monitoring and safety** **MR. BERNHARD NAGLESTAD** (Multiconsult Norge AS), **MR. SIGMUND BREKKE LANGELID** (Cautus GEO AS)	**Installation of a heavy king pile using driving guidance** **MR. JANNIK BEUSSE** (Hamburg University of Technology)
17:30	**Small strain stiffness within logarithmic contractancy model for structured anisotropic clay** **DR. SIVASITHAMPARAM NALLATHAMBY** (Norwegian Geotechnical Institute)	**Application of the Frozen and Unfrozen Soil model to modelling effects of freeze-thaw on low-volume roads** **MR. MIKKO TUOHINO** (Ramboll Finland Oy)	**Raked Piles for Abutment: The benefits of Driven Precast Concrete Piles for Low Carbon Infrastructure** **MR. KEVIN HAGUE** (Aarsleff Ground Engineering Ltd)	**Investigation on the rotational bedding of king piles on the basis of model tests** **MR. JANNIK BEUSSE** (Technisch Universität Hamburg)
17:45	**The effect of stress path on the dilatation angle of soils** **DR. MIRVA KOSKINEN** (City of Helsinki)	**Improving trafficability on thawing gravel roads** **DR. SEPPO SAARELAINEN** (Aalto University/Tmi Roussa)	**Analytical solution for two-phase flow of silica sol grouting in homogeneous fractures** **DR. LIANGCHAO ZOU** (KTH Royal Institute of Technology, Stockholm, Sweden)	

18:15 CLOSING OF NGM & BSGC 2020

Chaired by: Leena Korkiala-Tanttu & Juho Mansikkamäki
Stage: Stream 1