

Program for NORDROCS 2022

ver.2022-06-01

	Monday, September 5, 2022
11.00 – 16.00	Short Course 1 – Capping Design -The art of designing isolation layers to reduce environmental risk associated with contaminated sediments <i>NGI and Texas Tech University,</i> <i>Scandic Holmenkollen hotel</i> <ul style="list-style-type: none">• Contaminant mobility and intended cap functionality• Elements of cap design• Modeling using CapSim• Constructional considerations• Monitoring cap performance
11.00 – 16.00	Short Course 2 – In Situ Thermal Desorption by Conductive Heating <i>Haemers Technologies,</i> <i>Scandic Holmenkollen hotel</i> <ul style="list-style-type: none">• Introduction to thermal desorption• Scientific principles underlying thermal desorption• Overview of different in situ thermal desorption• Technologies• Conception and design – feasibility – lab and pilot• Tests• Conductive heating (TCH)• Sustainable development and thermal desorption
11.00 - 16.00	Workshop - Sustainability assessment as a tool for more sustainable and resilient remediation of soils, groundwater, and sediments <i>Ramboll,</i> <i>Scandic Holmenkollen hotel</i> <ul style="list-style-type: none">• What is sustainable remediation?• Methods for sustainability assessment?• Introduction to SURE• Applying sustainability assessment• Stakeholder dialogue best practices
18.30	Welcome reception with refreshments in Oslo City Hall
	<i>Tour and talk about the history of the building and its art</i>

	Tuesday, September 6, 2022 Venue: Scandic Holmenkollen hotel	
08.30 – 10.00	Registration and coffee	
10.00 – 11.00	Opening session, SAGA HALL A/B/C	
	<p>Welcome: Marianne Borgen, Major of Oslo</p> <p>Paul S. Cappelen, Coordinator for NORDROCS 2022</p> <p>Morten Jartun, President of Miljøringen, Norway</p> <p>Keynote speaker: Dietmar Müller-Grabherr, EU Common Forum Biodiversity, Circular Economy and Climate Change – streamlining Societal Challenges to Contaminated Land Management (within the EU Green Deal)</p>	
10.50 - 11.00	Gymnastics	
	SAGA HALL A/B/C	
11.00 - 12.00	<p>EPA session from 4 Nordic countries – Topic PFAS Chair: Vanja Alling, Norwegian Environment Agency</p> <p>Presentations and discussion, moderated by Dietmar Müller-Grabherr.</p>	
12.00 – 13.00	Lunch	
13.00 – 13.30	<i>Poster session and exhibition</i>	
	Parallel session 1 SAGA HALL A/B	Parallel session 2 SAGA HALL C
13.30 – 14.50	<p>Session A – Remediation of soil, rock and groundwater Chair: Mette M. Broholm (DTU)</p> <p>Keynote speaker: Mike Annable (University of Florida) The critical link between characterization and remediation.</p> <p>Nina Tuxen (Capital Region of Denmark) Innovative remediation of contaminant plumes as a sustainable alternative to traditional pump and treat.</p> <p>Gary Wealthall (Geosyntec Consultants) Advances in the Bioremediation of DNAPL source zones in fractured bedrock.</p>	<p>Session B – Soil as a resource Chair: Jarno Laitinen (Ramboll)</p> <p>Stefan Ritter (NGI) Reuse of waste and surplus masses as impermeable geological materials: Potential of pressfilter residual and excavated lime cement stabilised clay for landfill barriers.</p> <p>Klaus Weber (NIRAS) LCA screening of remediation methods - a simplified approach using life cycle profiles.</p> <p>Erika Kämäräinen (Ramboll) Biochar for managing sulphide bearing geomaterial.</p> <p>Cathrine Eckbo (NGI)</p>

		Reuse of end of life concrete: The problem of hexavalent chromium leaching.
14.50 – 15.50	Poster session and exhibition, matchmaking, coffee break	
15.50 – 17.10	<p>Session C – PFAS Chair: Linda Karlsson</p> <p>Keynote speaker: Hans Slenders (Arcadis) PFAS in soil and water: deal with it!</p> <p>Ingvild H. Nygård (Norconsult) PFOS-sorption in the groundwater fluctuation zone.</p> <p>Julie Kofoed (Danish Regions) PFAS findings in close to 1 100 site investigations at various businesses.</p>	<p>Session D – Urban challenges Chair: Ulrika Larson</p> <p>Outi Hyttinen (Sitowise) The Viinikanlahti Bay case - when contaminated lake sediments meet an international urban ideas competition.</p> <p>Agnieszka T. Bentzen (Region of Southern Denmark) Integrated water management in the future climate change for robust risk assessment from contaminated point sources.</p> <p>Hanna Almquist (WSP) From gas works site to residential area – challenges and solutions in assessing vapour intrusion of PAH.</p> <p>Louise Skytte Clausen (Sweco) and Sebastian Gustavson (Ultra Aqua) UV technology – A new way to remove chlorinated compounds from air.</p>
18.30 –	Drinks in the exhibition area	
19.00 –	Conference dinner in SAGA HALL A/B/C	
	Entertainment: Music by:	

Wednesday, September 7, 2022			
	SAGA A	SAGA B	SAGA C
8.30 – 09.50	<p>Session E – Remediation – Soil, rock and groundwater Chair: Aura Nousiainen (AFRY)</p> <p>Katerina Tsitonaki (WSP) Reagents for in situ remediation: State of the art and latest innovations.</p> <p>Azariel Ruiz-Valencia (University of Lyon) Bioelectrochemical Remediation of Petroleum-Contaminated Soil and Groundwater.</p> <p>Daniel Leigh (Evonik) Combining Biogeochemical Processes to Enhance Reductive Treatment of Chlorinated Organics and Metals.</p> <p>Peter Harms-Ringdahl, Martin Palmqvist (EnviFix) Investigation and remediation of soil at marinas and boat maintenance sites.</p>	<p>Session F – Emerging contaminants Chair: Patrick van Hees (Eurofins)</p> <p>Hans Peter Arp (NGI) Prioritizing emerging Persistent and Mobile organic substances in groundwater and drinking water through hazard and risk assessment for substitution and remediation.</p> <p>Mahdiyeh Mohammadzadeh (University of Oulu) Adsorption performance of surface-modified biosorbent for removal of antibiotics from wastewater.</p> <p>Henning Jensen (NGU) Microplastic in marine sediments –Results from the MAREANO mapping program and some analytical challenges encountered.</p> <p>Gøril Aasen Slinde (NGI) The environmental legacy of disposable paper plates - PFAS contamination in Tyrifjorden.</p>	<p>Session G – Site Investigations – Sediments Chair: Marianne Olsen (NIVA)</p> <p>Leo Regazzoni (SGF/Lektus) and Thomas Jansson (SGF/Geosyntech) Certified sampling in practice - 10 years with certified environmental sampling according to Nordic standard.</p> <p>Jens Laugesen (DNV) Trends and developments in innovative investigations and monitoring of marine sediments.</p> <p>Nils Ekerøth (NIRAS) Monitored natural recovery (MNR) in Drammensfjorden, Norway.</p> <p>Hubert de Jonge (Eurofins) A Danish case study for sampling in surface water with volume-based passive sampling – Sorbisense method.</p>
09.50 – 10.35	Coffee Break		

<p>10.35 - 11.55</p>	<p>Session H – Remediation – Soil, rock and groundwater Chair: Annika Fjordbøge (DTU)</p> <p>Bertil Ben Carlson (WSP) Pump & treat – Lessons learnt from the reassessment and optimization at more than 40 sites and best practice from current projects.</p> <p>Helena Hinrichsen (Envytech Solutions) Surface Active Foam Fractionation (SAFF): Effective PFAS removal from water using only air</p> <p>Lars Været (Norconsult) Remediation of PFAS contaminated ground at a former fire-fighting facility. From initial investigations to completed remediation. Lessons learned.</p> <p>Helena Nord (RGS Nordic) Remediation of a 1 km long PCE plume in the woods of Lappeenranta, Finland, using a Plume-Stop barrier with colloidal active carbon for in situ sorption and HRC for enhanced reductive dichlorination.</p>	<p>Session I – Site Investigations – Soil, rock and groundwater Chair: Paul S. Cappelen (NGI)</p> <p>Jesper B. Nielsen (NIRAS) Revisiting an old oil spill – new high resolution tools provide data for a new and much different conceptual model.</p> <p>Lars Davidsson (WSP) Evaluation of High Resolution Methods for VOC Contaminant and Flux Distributions in Igneous / Metamorphic Rock Settings.</p> <p>Simon Ross Stenger (NGI) Interpretation and visualization of contaminated soil at a former ferrosilicon smelter using implicit 3D modelling – is it worth the effort?</p> <p>Gro Lilbæk (NIRAS) High-resolution site characterization using new groundwater profiler.</p>	<p>Session J – Risk assessment – Sediments Chair: Morten Jartun</p> <p>Keynote speaker: Marianne Olsen (NIVA) Clean up levels for contaminated sediments based on bioavailability.</p> <p>Ann-Sofie Wernersson (SGI) Swedish Sediment Risk Assessment Strategy.</p> <p>Arto Itkonen (Sitowise) Lead shots in a sensitive spring lake – case Onkilampi, Suonenjoki, Finland.</p>
<p>11.55 - 12.55</p>	<p>Lunch</p>		
<p>12.55 – 13.25</p>	<p>Poster session and exhibition</p>		

<p>13.25 – 14.45</p>	<p>Session K – Remediation – Soil, rock and groundwater Chair: Mette Christophersen (Ramboll)</p> <p>Tove Mallin (RISE) Testbed PFAS - evaluation of remediation techniques for PFAS contaminations and PFAS-free fire extinguishing agents</p> <p>Michel Hubert (NGI), Optimizing soil washing as a remediation method for PFAS contaminated soil</p> <p>Søren Eriksen (Krüger) Thermal Conductive Heating for PFAS remediation.</p> <p>Jack Shore (Regenesis) Installation and operation of an injectable in situ permeable reactive barrier to prevent the advection of per- and polyfluoroalkyl substances at an airport.</p>	<p>Session L – Remediation – Sediments Chair: Jens Laugesen (DNV)</p> <p>Hilde Trannum (NIVA) Long-term biological effects of capping with thin layers of activated carbon in the Grenland fjords, Norway</p> <p>Jarno Laitinen (Ramboll) Minimizing sustainability impacts throughout dredging project – from decision making to stabilization.</p> <p>Sissel Ranneklev (NIVA) Identifying the most contaminated sediments along the coast of Norway.</p> <p>Alizee Lehoux (University of Uppsala) Remediation of contaminated fibrous sediments combined with energy production.</p>	<p>Session M – Risk assessment – Soil, rock and groundwater Chair: Jenny Norrman (Chalmers)</p> <p>Jussi Reinikainen (Finnish Environment Institute) Risk assessment of PFAS contaminated sites as a result of firefighting activities.</p> <p>Leo Yeung (Örebro University) Comprehensive assessment of poly-/perfluoroalkyl substances (PFAS) in contaminated soil.</p> <p>Mette M. Broholm (DTU) Degradation of pharmaceutical compounds in the plume emanating from the factory site in Grindsted – tools and evaluation of degradation potential.</p> <p>Torunn Hønsi (Western Norway Research Institute) Contaminated sites at risk: A GIS-based identification and assessment of possible increased pollution and reduced water quality due to climate change.</p>
<p>14.45 – 15.25</p>	<p>Poster session and exhibition, Coffee Break</p>		

15.25 – 16.35	<p>Session N – Sustainability Chair: Peter Harms-Ringdahl (Envifix)</p> <p>Keynote speaker: Alan Thomas (SuRF UK) Sustainable Remediation - a review of recent SuRF UK guidance and a look forward to future trends.</p> <p>Paul Drenning (Chalmers) A risk management framework for gentle remediation options.</p>	<p>Session O – Mining Chair: Mari Dahl (University of Helsinki)</p> <p>Keynote speaker: Pia Lindström (Boliden) Title:</p> <p>Paul S. Cappelen (NGI) Reclamation of Arctic landscape after 100 years of coal mining.</p>	<p>Session P – Environmental Geotechnics Chair: Tone Ratcliffe Smaavik (NGI)</p> <p>Keynote speaker: Suzanne Lacasse (NGI) Title:</p> <p>Marius Sjøvik (NGI) Stepwise preloading to expand the capacity at Langøya waste disposal site.</p>
Closing session with prizes for best posters (top 3)			
Thursday, September 8, 2022			
08:00 – 14.00	<p>Technical tour/Expedition Visit to Langøya landfill site. https://en.noah.no/for-clients/treatment-area/langoya/</p> <p>The technical tour will be on the 8th of September to the unique island Langøya, one hour south of Oslo . The company NOAH at Langøya has Norway’s national landfill for inorganic, hazardous waste, and also receive lots of waste from the other Scandinavian countries.</p> <p>Participants will be picked up by a bus at the venue and on the way to Langøya there will be a guided tour of the geology in the area. On Langøya we will visit the landfill and learn about NOAHs process. Lunch will be served in the nearby city of Holmestrand before the bus returns to Oslo Central Station.</p>		