



# NORDROCS 2021

-Crossing borders

Oslo, Norway on September 6<sup>th</sup> – 9<sup>th</sup>

## Second Call for Abstracts

Due  
February 15<sup>th</sup>, 2021

If you submitted an abstract in 2020, this can be re-submitted. Remember to send it to [nordrocsconference@gmail.com](mailto:nordrocsconference@gmail.com)



Conference Venue at Holmenkollen, Oslo.

Photo from Travel Weekly

NORDROCS 2021 is arranged by:



# NORDROCS 2021

8<sup>th</sup> Joint Nordic Meeting on Remediation of Contaminated Sites

**The Nordic countries invite you to NORDROCS 2021, the 8th joint Nordic Meeting on Remediation of Contaminated Sites in Oslo. The conference is arranged on September 7<sup>th</sup> – 8<sup>th</sup>, short courses on September 6<sup>th</sup> and excursions on September 9<sup>th</sup>.**

After seven successful NORDROCS conferences in Malmö (2006), Helsinki (2008), Copenhagen (2010), Oslo (2012), Stockholm (2014), Espoo (2016) and Helsingør (2018), we look forward to welcoming you in Norway again.

## OBJECTIVE

The objective of the NORDROCS conferences is to address issues on assessment and risk management of contaminated land and sediments in the context of Nordic conditions. The meeting intends to provide a forum for the exchange of information gathered through research and project experience.

Target groups include scientists, regulators, consultants, contractors and other professionals working with contaminated sites and sediments in Nordic countries, countries in Northern Europe and around the Baltic Sea.

## ABSTRACT AND PAPER SUBMISSION

We welcome abstracts in English on conference topics by February 15<sup>th</sup>, 2021. Abstracts will be assessed by a Review Committee. More information on submission of abstracts can be found on the conference web page: [www.nordrocs.org](http://www.nordrocs.org).

Oral and poster presentations will be selected based on the Review Committee's recommendations. For accepted oral presentations a short paper (maximum two pages) will be required for the conference proceedings.



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## KEYNOTE AND INVITED SPEAKERS

The Mayor of Oslo, Marianne Borgen, will open the conference on the 7<sup>th</sup> of September.

The keynote speakers will include experts from different Scandinavian countries, but also from other countries and different continents:



### **Suzanne Lacasse, Norwegian Geotechnical Institute (NGI)**

Suzanne Lacasse is a Canadian civil engineer who works as an expert adviser at NGI. Lacasse received her Ph.D at Massachusetts Institute of Technology (MIT) in the United States in 1976. She joined NGI as a postdoctoral fellow in 1978 and served as director there from 1991 to 2012. Lacasse has received many awards and honours for her work. In 2001 she was elected to the National Academy of Engineering in the USA. She is an honorary doctorate at NTNU in Norway and at the University of Dundee in Scotland. In 2015, she was chosen to hold the Rankine lecture, a lecture organized annually by the British Geotechnical Association. The lecture is often referred to as the "Nobel Prize for Geotechnics". She later gave this lecture in several places around the world. Lacasse was appointed officer of the Order of Canada in 2018 and has also received several other awards all over the world.



### **Michael Annable, University of Florida, USA**

Mike Annable is a Professor in the Department of Environmental Engineering Sciences at the University of Florida. He joined the faculty in 1992 after receiving his Ph.D. from Michigan State University where he worked on soil vapor extraction of multi-component non-aqueous phase liquids. His current interests are in physical-chemical processes related to field scale application of innovative technologies for subsurface remediation. He is also investigating innovative techniques for measuring groundwater flow and contaminant flux in aquifers. He has published more than 60 journal articles and currently serves as an Associate Editor for the Journal of Contaminant Hydrology.



### **Pia Lindström, Boliden Mines, Sweden**

Pia Lindström is Director of HR and Sustainability for Boliden Mines. For more than 20 years she has worked with environmental health and safety in the mining industry. Her main focus is to establish a strategic focus and systematic approach within the sustainability field. She works with mine closure plans, which include both technical and ecological restoration, and that can give added value to the local community. Other important focus areas are deposition techniques and deposit sites for mine waste and how waste can be turned into a resource. She is head of the Environmental Committee in Svemin (Swedish mining, minerals and metal association) and Sip STRIM (Strategy Innovation program for the Swedish Mining and Metal production industry).



### **Alan Thomas, SuRF UK, Great Britain**

Dr. Alan Thomas is a technical fellow in ERM based in the Oxford, UK office, where he leads the ERM global remediation technical community. He has over 25 years' experience in the investigation, risk assessment and remediation of contaminated land both in the UK and internationally. Alan enjoys leading and working with multidisciplinary teams and is enthusiastic about new technologies and implementing new approaches to help his clients. Alan is a strong advocate of the sustainable remediation of contaminated and is a member of the SuRF UK steering group.



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## **Marianne Olsen**, Norwegian Institute for Water Research

Marianne Olsen is the research manager for Environmental Contaminants at the Norwegian Institute for Water Research (NIVA). Her background is within the fields of marine biology, ecotoxicology and contaminants. She has a broad experience from industry, government and science, working with effects, risk assessments, and remediation for contaminated sediments. Marianne holds a Ph.D. in Ecology and is a highly respected disseminator of science and popular science, receiving the Miljøringen Honorary award for her enthusiastic engagement within her field in 2017.



## **Hans Slenders**, Arcadis, The Netherlands

Hans Slenders is a civil engineer with over 30 years of experience in soil remediation and a larger part of his activities in Dutch research programmes on soil and subsurface. He was and is chair of the working groups on sustainable remediation and Land Stewardship of the European Industry Network NICOLE. Hans is solution oriented and effectively combines policy with technology. He can illustrate innovations with real life cases. He is author of publications and guidelines on Remediation Techniques, Emerging contaminants, Groundwater Energy and Groundwater management and Sustainable Remediation. Winner of the Dutch engineering price in 2009 on a combination of Groundwater remediation and Groundwater Energy. Hans Slenders is an invited speaker at soil conferences around the world.



## **Hanne Møller Jensen**, HOFOR, Denmark

Hanne Møller Jensen has many years of experience in risk management, strategic planning and handling of contaminated soil and groundwater. Her background includes both public administration, private consulting and science. During her current occupation in the planning section of HOFOR, the biggest water supply company in Denmark, she has hands on experience in dealing with the threats of emerging contaminants towards drinking water in Denmark. She is particularly concerned about creating collaboration to handle the complex challenges. Hanne holds a Ph.D in environmental engineering.



## **Dietmar Müller-Grabherr**, EU COMMON FORUM, Austria

Dietmar Müller-Grabherr works with Environment Agency Austria. National main responsibilities include supervising the national program, chairing the working group "Risk assessment of contaminated sites" at the Austrian Standards Institute, and acting as associated expert to the Austrian parliaments Commission on the Remediation of Contaminated Sites. By the background of his national function he also defines and represents Austrian positions with regard to soil and groundwater related EU policies and international standardisation procedures regarding soil quality. During the period from 1998 until 2014 he was regularly involved to European R&D activities focused to land management and remediation. Since September 2017 he is General Secretary to COMMON FORUM on Contaminated Land in Europe and ICCL, the European and the global network of policy advisors and regulators in contaminated land management.

In addition, there will be invited speakers from EPA in Denmark, Finland, Norway and Sweden.

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## REVIEW COMMITTEE

**Mette Christophersen**, Head of Dept., Ph.D., Ramboll, Denmark

**Ursula McKnight**, Associate Professor, DTU Environment, Technical University of Denmark

**Aura Nousiainen**, Ph.D. Pöyry Finland Oy, Finland

**Mari Dahl**, MSc, Post-graduate researcher, University of Helsinki, Finland

**Paul S. Cappelen**, Head of Dept., M.Sc., Norwegian Geotechnical Institute, Norway

**Morten Jartun**, Ph.D., Norwegian Institute for Water Research, Norway

**Patrick van Hees**, Associate Professor (Örebro University)/Eurofins, Sweden

**Jenny Norrman**, Associate Professor, Chalmers University of Technology, Sweden

## ORGANIZING COMMITTEE

**Paul Sverdrup Cappelen**, Head of Dept., Norwegian Geotechnical Institute/Miljøringen, Norway

**Ulrika Larson**, Environmental Consultant, Empirikon, Sweden

**Arne Rokkjær**, Chief Consultant, Lyngby-Taarbæk Utility Services Ltd/ATV Soil and Groundwater, Denmark

**Jarno Laitinen**, Senior Adviser Ramböll/MUTKU, Finland

## ASSISTING ORGANIZING COMMITTEE

**Morten Jartun**, PhD, Norwegian Institute for Water Research/Miljøringen, Norway

**Aura Nousiainen**, PhD, Pöyry/MUTKU, Finland

**Peter Harms-Ringdahl**, Environmental Consultant, EnviFix/Renare Mark, Sweden

**Lisbeth Verner**, Head of Secretariat, ATV Soil and Groundwater, Denmark

**Mette M. Broholm**, Associate Prof., DTU Environment/ATV Soil and Groundwater, Denmark

**Mari Sunde**, Head of Secretariat, Miljøringen, Norway

## CONFERENCE TOPICS

### **A: SITE INVESTIGATIONS AND MONITORING – SOIL, ROCK AND GROUNDWATER**

1. New methods for site investigation
2. Passive samplers
3. Online measurements
4. Innovative monitoring
5. Internet of things, environmental sampling and novel intelligent sampling methods
6. Geoinformatics

### **B: SITE INVESTIGATIONS AND MONITORING – SEDIMENTS**

1. New methods for site investigation
2. Passive samplers
3. Online measurements
4. Innovative monitoring
5. Internet of things, environmental sampling and novel intelligent sampling methods
6. Geoinformatics

### **C: RISK ASSESSMENT – SOIL, ROCK AND GROUNDWATER**

1. Spreading
2. Degradation
3. Natural attenuation
4. Risk assessment and quality criteria - Differences in the Nordic countries
5. Water Framework Directive

### **D: RISK ASSESSMENT – SEDIMENTS**

1. Spreading
2. Degradation
3. Natural attenuation
4. Risk assessment and quality criteria - Differences in the Nordic countries

### **E: REMEDIATION – SOIL, ROCK AND GROUNDWATER**

1. Project and risk management
2. Remediation of source zones
3. Plume remediation and flux reduction
4. Bioremediation
5. BAT - Best Available Technology

### **F: REMEDIATION – SEDIMENTS**

1. Project and risk management
2. Dredging and capping
3. Stabilization
4. BAT - Best Available Technology

### **G: SUSTAINABILITY MANAGEMENT**

1. Choosing the right remediation technique
2. Sustainability in remediation
3. Integrating the UN SDGs
4. Area planning
5. Communication and stakeholder involvement

## **H: SOIL AS A RESOURCE**

1. Management of excavated soil
2. Landfills
3. Reuse
4. Circular economy
5. Land stewardship

## **I: URBAN CHALLENGES**

1. Climate change/climate adaptation
2. Urban waters
3. Brownfields
4. Vapour intrusion into houses and office buildings (indoor air)
5. Smart cities - What are the future possibilities?

## **J: CONTAMINANTS OF EMERGING CONCERN**

1. PFAS
2. Pesticides
3. Microplastics
4. New contaminants
5. Other contaminants

## **K: MINING**

1. Secure deposition of mine waste (on land or under water)
2. Risk assessment
3. Reclamation/restoration of abandoned mines
4. Site investigation and monitoring

## **L: ENVIRONMENTAL GEOTECHNICS**

1. Climate change/climate adaptation
2. Landfills - design, stabilization, closure, bio barriers, erosion of old landfills
3. Mine tailings
4. Geotechnical and geological challenges
5. Hazard and risk assessment
6. Modelling

## **SHORT COURSE**

On September 6<sup>th</sup> a short course/workshop can be arranged in connection with the conference. Suggestions for themes or topics are most welcome, from which tentatively 2 – 4 suitable suggestions will be chosen. The organizing committee welcomes companies to suggest short courses which can be facilitated through the conference registration. The NORDROCS 2021 conference will not cover costs spent on preparations for the short courses.

## **ABSTRACT SUBMISSION FOR ORAL AND POSTER PRESENTATION**

Oral presentations on the 7<sup>th</sup> – 8<sup>th</sup> of September will be 20 min., incl. 3 min. for questions. Please visit the website for submission form. When submitting your abstract, please copy into the template provided.

Scientific posters will be on display during all conference days. Time for discussions between poster presenters and the audience will be provided during a poster session. There will be a "Best Poster Award" for the 3 best posters at the conference.

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## LOCATION

Conference venue and accommodation will be at Scandic Holmenkollen Park in Oslo. Scandic Holmenkollen Park is located an impressive 350 metres above the city. Here you can enjoy views over the capital. The hotel is located 9 km from the city centre, or 30 minutes by underground from Oslo Central Station. With its location right next to the Holmenkollen National Ski Arena, the Ski museum, and Nordmarka forest, there are outdoor activities to suit everybody. There are miles of hiking trails right on your doorstep, and bikes you can borrow for free.

More information: <https://www.scandichotels.com/hotels/norway/oslo/scandic-holmenkollen-park>

## SOCIAL PROGRAM

An informal get together at 6 pm – 7:30 pm on September 6<sup>th</sup> will be in Oslo City Hall (the Mayor of Oslo will be our host). More information will follow.

The conference dinner will take place at the venue in Holmenkollen in the evening on September 7<sup>th</sup>. More information will follow.



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## EXCURSION

You are invited to join our excursion on September 9<sup>th</sup>. Companies can suggest/invite to excursion, but cost spent on preparations will not be covered by NORDROCS 2021. More information will follow.



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## REGISTRATION AND FEES

Registration will open in March/April 2021.

The “Early Bird” conference fee is NOK 7 500 (~ € 720\*) if you register before May 15<sup>th</sup>, 2021. After May 15<sup>th</sup> the fee will be NOK 8 200 (~ € 790\*).

## EXHIBITION

For companies interested in presenting their activities at NORDROCS 2021 an exhibition area has been reserved. This area is also used for coffee breaks etc. and provides the exhibitors with an excellent opportunity to present their activities, products and/or other news to the delegates. The price for a stand in the exhibition area is NOK 8 000 (~ € 770\*), not including participation fee. Please contact conference secretariat at Resia, [conference@resia.se](mailto:conference@resia.se), att. Ulrica Edström.

## SPONSORSHIPS

Sponsorships are most welcome – min. NOK 13 000 (~ € 1 250\*). Sponsor logos will be presented on the web page, on the calls for abstracts, on the main screens during breaks and printed in the conference program/compendium.

Package deal, which include sponsorship, exhibition stand and participation fee for one person, will be available at NOK 25 000 (~ €2 400\*). Please contact conference secretariat at Resia, [conference@resia.se](mailto:conference@resia.se), att. Ulrica Edström.



Photo from Pixabay

We look forward to exciting days in Oslo. See NORDROCS webpage for continuing updates:  
[www.nordrocs.org](http://www.nordrocs.org)

E-mail: [nordrocsconference@gmail.com](mailto:nordrocsconference@gmail.com)

Secretariat in Norway: E-mail: [post@miljoringen.no](mailto:post@miljoringen.no) Phone: +47 908 35 193

\* Payment will be in NOK, using the exchange rate at the date of payment. The exchange rate in January 2021 has on average been approximately 1€ = 10.4 NOK. In the prices above an exchange rate of approximately 10.4 is used.

*Alterations may occur*

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## NORDROCS 2021 – SPONSORS



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