

NGV 2022

5th Nordic Ground Vibration Day
24 October 2022 • Aarhus • Denmark



Programme

09:00 Registration and coffee

09:30 Welcome and introduction

- Opening by Lars V. Andersen

09:40 The Bengt B. Broms Lecture

- Ground vibration from high-speed lines on soft ground: site characterization, numerical modelling, and countermeasures
Amir M. Kaynia, Norway

10:20 Quick coffee break

10:40 Session 1: Modelling and measurements of ground vibrations

- Measurement of the time-dependent pile shaft friction with high-strain dynamic and static pile load tests
Anders B. Lundberg, ELU Konsult AB, Sweden
- Assessment of train-induced vibration propagation through a concrete structure based on vibration measurements and ad hoc theoretical models
Alessandro Parodi, COWI A/S, Denmark
- Development of a stop-driving criterion for vibrodriven steel sheet piles – definition of problem, results of full-scale field tests, production experiences and numeric attempts
Kenneth Viking, Trafikverket, Sweden
- Effect of blasting on slopes with quick clay – overview of ongoing activities
Jörgen Johansson, Norwegian Geotechnical Institute, Norway

12:00 Lunch buffet at Navitas (including coffee for the Swedes)

13:00 News session

13:20 Session 2: Recent case studies of ground vibrations

- Blast triggered landslide at Steinvik, Tana, Norway
Samson A. Degago, Norwegian Public Roads Administration, Norway
- Building damage due to vibration from rock blasting
Karin Norén-Cosgriff, Norwegian Geotechnical Institute, Norway

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- Interpretation of track alignment measurements in a geodynamic perspective
Jonas Majala, Luleå University of Technology, Sweden
- Impact of ground vibration from passing trains to the nearby building
Lindita Kellezi, Geo, Denmark
- Design approach regarding critical train speed according to the Swedish technical requirements: need for clarification and changes
Mehdi Bahrekazemi and Tomas Bym, WSP Sverige AB, Sweden

15:00 Coffee and refreshments

15:30 Session 3: Recent advances in modelling and measurement techniques

- Prediction of train-induced vibrations: from track to building
Jens Malmborg, Lund University, Sweden
- Train-induced vibrations in soil and structures using a mixed-frame-of-reference approach
Paulius Bucinskas, Wood Thilsted Partners, Denmark
- Non-safe zones for train resonance – an empirical approach
Niels Mortensen, nmGeo, Denmark
- Advanced vibroexciter for big structures – Force and displacement measured at excitation point and the excitation signal is free of choice
Mats Hammarqvist, Efterklang: a part of AFRY, Sweden

16:50 Conclusion

- Final discussions
- Presentation of the venue for the 6th Nordic Ground Vibration Day (NGV 2024)
- Closure by Lars V. Andersen

17:00 End of technical and scientific programme

17:15 Walk & talk

18:30 Dinner at Fysisk Kantine (Main campus of Aarhus University)