

EAGE

EUROPEAN
ASSOCIATION OF
GEOSCIENTISTS &
ENGINEERS



SOCIETY OF EXPLORATION
— GEOPHYSICISTS —



EAGE/SEG Research Workshop on Geophysical Aspects of Smart Cities

17-18 DECEMBER 2020 • ONLINE

• **Workshop Brochure | Call for Abstracts**

WWW.EAGE.ORG

TECHNICAL COMMITTEE

Ida Fabricius*	Technical University of Denmark
Friso Veenstra	TNO
Sabine Kruschwitz	Tu Berlin
Paolo Mazzucchelli	Aresys Srl
Ernst Niederleithinger	BAM

*Chair

ABOUT THE WORKSHOP

In urban areas, it is an environmentally attractive solution to do geophysical mapping of subsurface geology by using ground borne vibrations from vehicles and machines as an input signal. By using stationary geophones or fiber-based distributed acoustic sensing the methodology should be also economically attractive for monitoring subsurface change under cities and intercity infrastructure. This is a methodology under development, and it has so far only been implemented in few cases, but as signal processing technology develops, the methodology would be anticipated to have high potential in several locations. It can be foreseen, with only little fantasy, that the methodology will be especially relevant for buildings and infrastructure located on potentially unstable ground. The question that should be the focus of the workshop is to which extent this Smart Cities technology will have a potential in European cities. Is it the time right now to develop the implementation? In this context it is relevant to ask what on one hand is the requirements with respect to source of signal, data acquisition and data processing. On the other hand, it is relevant to ask under which geological and geotechnical conditions the methodology is most relevant.

This workshop will focus on theoretical and practical challenges faced by this upcoming method. In this context, the workshop will encourage discussion of completed or planned case studies.

AIMS OF THIS WORKSHOP

The participants will achieve a state of art of the novel use of ambient noise as signal for near surface geological mapping and monitoring.

The target audience is geophysicists, civil engineers and geologists involved in the development of urban infrastructure.

SUBMISSION GUIDELINES

The technical committee invites submissions of 1-2 page abstracts until 11 October 2020. To submit your abstract and read all guidelines please visit the event website via events.eage.org.

TOPICS

The committee would like to encourage you to submit your abstracts about Geophysical Aspects of Smart Cities on the following specific topics:

- Ground borne vibrations
- Derivation of stiffness parameters of soils and rocks from passive geophysics
- Fiber-based distributed acoustic sensing
- Ambient seismic imaging
- Integration of Geophysics and Civil Engineering Case studies
- Machine learning applications
- Mapping and monitoring for underground natural and man-made structures
- Urban geohazard monitoring and early warning
- Traffic monitoring and optimization by geophysical techniques
- Practical application and lessons learned from case studies
- Use of pre-existing fibre optic telecom cables for monitoring
- Combined active and passive interferometric seismic surveys in urban areas
- Geophysical technologies in ultrasonic testing of concrete structures
- Connection of NDT and geophysical data to structural design, assessment, GIS and BIM

IMPORTANT DATES

The Call for Abstracts is now open!

Abstract Submission Deadline	11 October 2020
Early Registration Deadline	31 October 2020
EAGE/SEG Research Workshop	17-18 December 2020

SPONSORING

The EAGE/SEG Research Workshop on Geophysical Aspects of Smart Cities offers excellent sponsoring opportunities to create high visibility for your brand. For more information about sponsoring, please refer to the 'Sponsoring Opportunities' page which is available on the event website (via events.eage.org) or contact us via eage.events@eage.org.

CONTACT

For further up-to-date information, please visit the event website via events.eage.org or contact the EAGE Europe Office via eage.events@eage.org or +31 88 995 5055.

EUROPE OFFICE
+31 88 995 5055
EAGE@EAGE.ORG

RUSSIA & CIS OFFICE
+7 495 640 2008
MOSCOW@EAGE.ORG

MIDDLE EAST/AFRICA OFFICE
+971 4 369 3897
MIDDLE_EAST@EAGE.ORG

ASIA PACIFIC OFFICE
+60 3 272 201 40
ASIAPACIFIC@EAGE.ORG

LATIN AMERICA OFFICE
+57 1 7449566 EXT 116
AMERICAS@EAGE.ORG

HEAD OFFICE • PO BOX 59 • 3990 DB HOUTEN • THE NETHERLANDS • +31 88 995 5055 • EAGE@EAGE.ORG

www.eage.org



join us on social media!