



You are invited by the Geotechnical Research Group AU and Ove Arup & Partners Danmark A/S to

SHORT COURSE & INDUSTRY SEMINAR ON “EARTH OBSERVATION MONITORING AND VULNERABILITY ANALYSIS OF SURFACE ASSETS EXPOSED TO SUBSIDENCE”

Lecturers: Prof. Dario Peduto¹, Dr. Gianfranco Nicodemo²

¹Associate Professor at the Department of Civil Engineering (DICIV), University of Salerno – Fisciano (Italy)

²Researcher at the Department of Civil Engineering (DICIV), University of Salerno – Fisciano (Italy)

Short course, 03–04 June 2024

Department of Civil and Architectural Engineering - Aarhus University, Aarhus (Denmark)

Presencial industry seminar, 06, June 2024

Ove Arup & Partners Danmark A/S, Copenhagen (Denmark)

PROGRAMME SHORT COURSE (hybrid format)

Part 1: MULTI-SOURCE GEOTECHNICAL MONITORING TECHNIQUES

- Ground displacement monitoring over small to wide areas: ground-based and innovative (DInSAR) monitoring techniques (1 hour)
- Overview of possible applications in the geotechnical field with focus on subsidence risk (1 hour)
- Tutorials and case history I: analysis and interpretation of DInSAR-derived displacements and their use in subsidence-affected built-up area (2 hours). *Suggested a laptop with GIS, Excel or Matlab installed.*

Part 2: SUBSIDENCE: DETECTION, MAPPING AND VULNERABILITY ANALYSIS

- Subsidence detection and mapping at different scales (1 hour)
- Vulnerability assessment of geotechnical systems and contribution to modelling of settlements (buildings, embankments, bridges, quay walls) (1 hour)
- Tutorials and case history II: vulnerability analysis and forecasting tools for buildings affected by subsidence-induced settlements (2 hours). *Suggested a laptop with GIS, Excel or Matlab installed.*

Date: Part 1: 12:00 –16:00 Monday 3rd June. Part 2: 8:00 –12:00 Tuesday 4th June

Place: Department of Civil and Architectural Engineering - Aarhus University, Aarhus
Navitas. Inge Lehmanns Gade 10, 8000 Aarhus C

Room: 04 . 056 (4th floor)

Zoom (from remote attendance) link: <https://aarhusuniversity.zoom.us/j/64083286387>

NO REGISTRATION FEE. REGISTRATION REQUIRED FOR PHYSICAL ATTENDANCE:
<https://forms.gle/ib4z4MmGbBJDPU1C7>

PROGRAMME SEMINAR

TRENDS IN GEOTECHNICAL MONITORING FOR SUBSIDENCE RISK ANALYSIS IN BUILT-UP ENVIRONMENT

- Overview of innovative geotechnical monitoring techniques (basic of SAR sensors and DInSAR processing) and their applications in the field of geotechnics/engineering geology. Integrated multi-source data analysis of subsidence-affected built-up environment (40 minutes)
- Q&A session (20 minutes)

Date: 11:30 – 12:30, Thursday 6th June 2024

Place: Ove Arup & Partners Danmark A/S, Axel Towers, Axeltorv 2K, 3rd Floor, 1609 København V

REGISTRATION REQUIRED: PLEASE EMAIL ANDREA FRANZA (anfr@cae.au.dk)