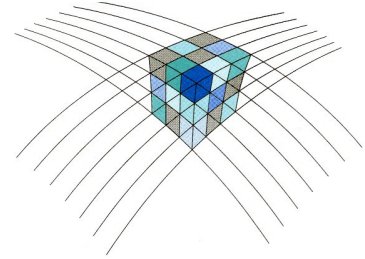


NCG



Netherlands Center for Geodesy and Geo-informatics

## Abstract submission for the NCG Symposium 2020

Abstract submission deadline: **24 August 2020**

Please submit your abstract EasyChair

<https://easychair.org/conferences/?conf=ncg2020>

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Presentation title: Think or Sink: unravelling anthropogenic causes of subsidence with a hybrid AI approach

Demo: no

Abstract (~100 words and optionally 1-2 figures):

The Netherlands is subject to anthropogenic and natural subsidence with rates for which the relative contribution of each process to total subsidence (i.e. natural plus anthropogenic) is still unclear. Such information is important for stakeholders to support decision making on subsidence mitigation and it should be substantiated with independent scientific studies.

We present the outline of a hybrid Artificial Intelligence (AI) and knowledge-based physical model (geomechanical models) workflow to disentangle different subsidence forcing. We use static (structural model) and time-dependent data for both surface (geodetic measurements: GPS, levelling and InSAR) and subsurface (phreatic groundwater level, reservoir pressure).

We show preliminary results of the approach for an area covering a gas field in the Friesland coastal plain and an area in the peat-rich central Rhine-Meuse delta plain.