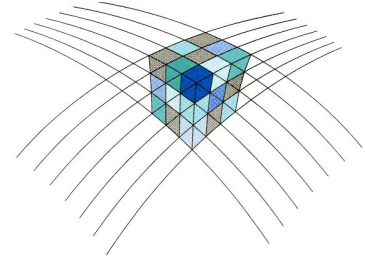


NCG



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: Unsupervised and Generalizable Post Disaster Building Damage Detection from Earth Observation Imagery using Anomaly Detecting Generative Adversarial Networks.

Demo: no

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

Anomaly detecting Generative Adversarial Networks (GANs) could provide a solution for unsupervised and generalizable post-disaster building damage detection. In this research, we aimed to investigate whether this method could detect post-disaster building damages from satellite and Unmanned Aerial Vehicle (UAV) imagery. Moreover, we aimed to investigate how generalizable this method is to different typologies of damages or geographical locations. Under certain constraints, the method was able to detect damages with average performance. The method generalizes well for certain damage typologies and locations. Although the results show that the method provides potential for unsupervised and generalizable post-disaster damage detection, we conclude that as of yet it is not the perfect solution.