

## BIG DATA CHALLENGE AND OPPORTUNITIES FOR SATELLITE MONITORING

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Launch of ESA's Copernicus program initiated new era of Big Data in Earth observation. With availability since 2015 of large amount of "free and open" high-resolution Landsat-8 images[1] and Sentinel-1 and 2[1-5,8], it becomes feasible to develop satellite monitoring systems at high and medium spatial resolution scale. Preliminary results and prospects of several pilot agricultural monitoring projects[3] in Ukraine will be presented. In particular[4,7], we will present the results of crop monitoring within Google Earth Engine Research Award project, as well as country level demonstration results from ESA "Sentinel for Agriculture" project. Optical and radar data fusion within deep learning approach to data processing[1-6] allow increasing robustness and accuracy of satellite agricultural monitoring[2,4] and will make it possible implementation of preoperational satellite monitoring system.

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