

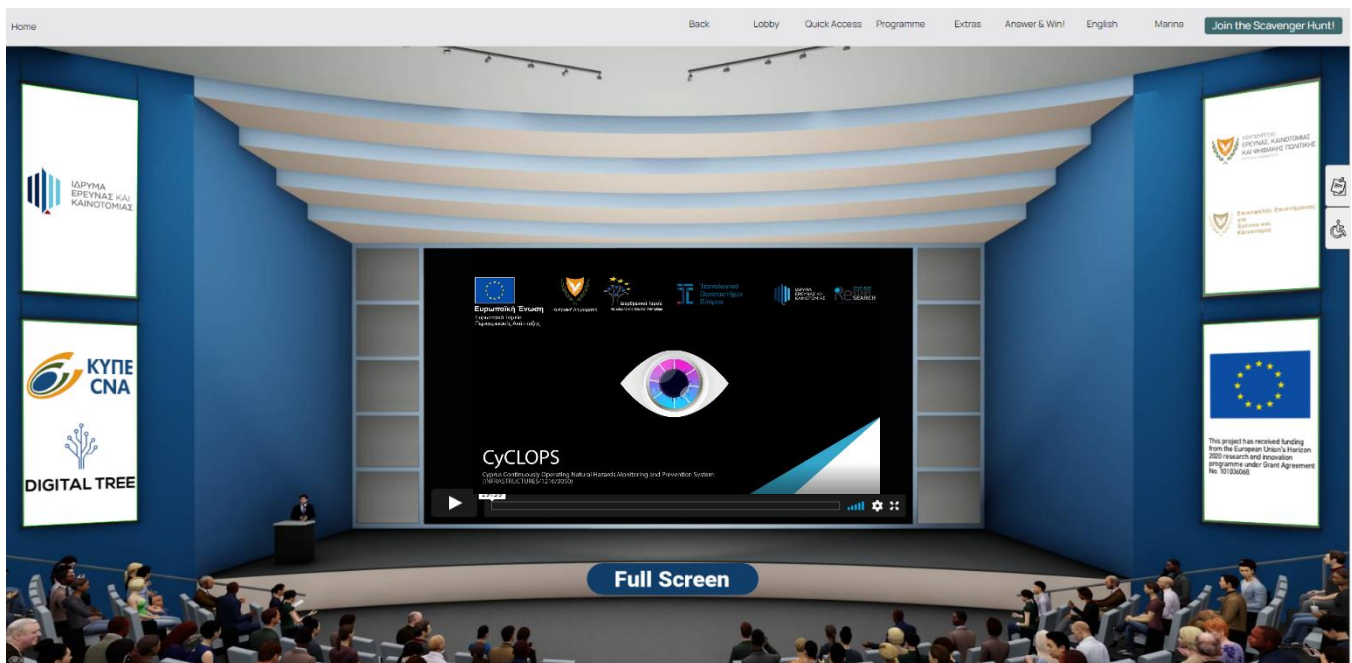


CyCLOPS News Bulletin December 2021

Researcher's Night 2021

The 2021 Researcher's Night was originally scheduled for September 25, 2019. Due to the emergency measures taken as a result of the Covid-19 pandemic, the European Commission decided that its virtual organization on the 24th of September 2021.

CyCLOPS Project participated at the European Researcher's Night organized by the Research and Innovation Foundation of Cyprus, in auditorium live streaming. The 'Researcher's Night' is an annual event aims to the familiarization of the public with the world of science and research. Concordantly, the event highlights the importance of the scientists in the society. Our video presents the installation of the CyCLOPS multi-parametric network, in detail. You can find our video at the following [Youtube Link](#).





Installation of the CyCLOPS Mobile Segment

The Mobile Segment of CyCLOPS includes five (5) cutting-edge continuously operating high-rate GPS/GNSS reference stations, weather stations, and tilt-meters, which have been deployed in areas of interest which have already suffered the impact of natural and anthropogenic hazards. The specifications of the equipment and details of the new sites follow:

Monumentation	Stainless Steel Pillar
GNSS Receiver	Trimble® Alloy (GPS+GLN+GAL+BDS+IRNSS+QZSS+SBAS)
GNSS Antenna	Trimble® Ti-v2 Geodetic Choke Ring with SCIGN Radome
Weather Station	Vaisala PTU 307 with solar radiation shield
Tiltmeter	Jewell D-711-A-S

Installation of Mobile Segment at Pissouri Village

One of the most highly affected by natural hazards areas in Cyprus is the Pissouri Village. Pissouri is located in Limassol's district, Cyprus, equidistant from Limassol and Paphos cities. Following the re-activated ground movements within the Limnes in Pissouri, first noticed by residents in 2012, continue to cause significant architectural and structural damages to many properties, up to the present. Due to the remaining uncertainties over the depth(s) of sliding, the acceleration, and the direction of the landslides, Limnes area and Pissouri region are generally monitoring through the CyCLOPS project.

Totally three (3) GNSS Seismic Mobile Stations have been installed, covering the wider area of Pissouri village. To achieve maximum accuracy during measurements provided by the International GNSS Service (IGS) and EUREF's Permanent Network (EPN), two of the Mobile Stations have been in the highest points of the village.

25 October 2021 - CUT300CYP GNSS Mobile Station at Pissouri Area



CyCLOPS

(INFRASTRUCTURES/1216/0050)

**Cyprus Continuously Operating
Natural Hazards Monitoring & Prevention System**



European Union
European Regional
Development Fund



Republic of Cyprus



Structural Funds
of the European Union in Cyprus



RESEARCH
& INNOVATION
FOUNDATION



26 October 2021 - CUT400CYP GNSS Mobile Station at Pissouri Area



27 October 2021 - CAV000CYP GNSS Mobile Station at Pissouri Area



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Installation of Mobile Segment at Vassiliko Open-Pit Mine

Monitoring and identifying geohazards in open-pit mines, such as surface deformation, is critical in all planning and development operations stages. Landslides are considered the most dangerous natural hazard in the mining industry. Vassiliko Open pit mine is the largest Quarry in Cyprus, located in Kalavasos village in the Larnaca District. The extraction of the limestone is used as basic raw material of the cement production in Vassiliko Cement Company in Cyprus.

19 November 2021 – CUT200CYP GNSS Mobile Station at Vassiliko Open-Pit Mine



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Installation of Mobile Segment at Choirokoitia Archeological Site

The lack of a comprehensive picture of sites affected by geohazards led to the conception of CyCLOPS project, to monitor monuments and sites in Europe which are inscribed on UNESCO's World Heritage List (WHL) and are potentially unstable due to geo-hazards. Choirokoitia Archeological site is endangered by falling rocks located on a steep ridge right above the archeological monuments. One (1) GNSS Seismic Mobile Station has been installed to the highest point of the site, in order to achieve maximum accuracy during measurements provided by the International GNSS Service (IGS) and EUREF's Permanent Network (EPN).

25 November 2021 – TROD00CYP GNSS Mobile Station at Choirokoitia Archeological Site



Publication

1. C. Danezis. The Role of Strategic Infrastructures for Space-based Earth Observation vis-a-vis Resilient Societies: The Example of CyCLOPS. In Third Phase of the Consultation Forum for Sustainable Energy in the Defence and Security Sector (CF SEDSS III), Online, November 2021. European defence agency.

