

# Press Release



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## Innovative research work in progress by the PV Technology Laboratory of the University of Cyprus on fault detection in photovoltaics by utilizing unmanned vehicles



The PV Technology Laboratory of the Department of Electrical and Computer Engineering and FOSS Research Centre for Sustainable Energy of the University of Cyprus, participates in a transnational network for the implementation of a research project on fault detection in photovoltaics by utilizing unmanned vehicles (acronym: “AID4PV”).

AID4PV aims to face the main challenges of the photovoltaic (PV) industry and to provide an unmanned aerial vehicle (UAV) platform for decision-making and modular approach to support PV plant diagnostics. The decision-making capabilities will be investigated, adding the possibility to perform predefined actuations by the UAV-platform to perform remedy actions minimizing the time since an anomaly is detected and certain actions are carried out. The UAV platform will capture electroluminescent (EL), Red Green Blue (RGB) and Infrared Thermography (IRT) images that when integrated with electrical data analysis, near real-time fault detection will occur, leading to time and cost-efficient PV plant diagnosis.

The implementation of the proposed UAV-platform will provide decision-making and remedy actions that will support PV plant operators with advanced monitoring capabilities and functionalities. Operation and maintenance (O&M) costs will be decreased, while the PV plant performance is expected to be improved. As a result, the levelised cost of electricity (LCOE) will be reduced, thus rendering the technology more competitive for enhanced penetration in the global electricity mix. Ultimately, through increased PV penetration, AID4PV will assist in climate change mitigation, reduction of CO<sub>2</sub> emissions and eventually improved quality of life.

AID4PV is scheduled to run for 30 months and is coordinated by the Spanish company TSK Information Technologies Division. Partners are the Circuits, Sensors and Renewable Energy Sources (CSRES) Laboratory and Research Team of Spatial Informatics (SenseLab) of the Technical University of Crete (TUC) and the Photovoltaic Technology Laboratory of the Department of Electrical and Computer Engineering and FOSS Research Centre for Sustainable Energy of the University of Cyprus (UCY). The total project funding secured is €685.849 and the funding for the University of Cyprus is €174.000.

The project is supported under the umbrella of SOLAR-ERA.NET Cofund 2 Additional Joint Call by the Centre for the Development of Industrial Technology (CDTI) in Spain, the General Secretariat for Research and Technology (GSRT) in Greece and the Research and Innovation Foundation (RIF, P2P/SOLAR/1019/0012) in Cyprus. SOLAR-ERA.NET Cofund 2 Additional Joint Call is supported by the European Commission within the EU Framework Programme for Research and Innovation HORIZON 2020 (Grant Agreement N° 786483).

For more information, you may contact the University of Cyprus Project Coordinator, Professor George E. Georghiou (email: [geg@ucy.ac.cy](mailto:geg@ucy.ac.cy)) or visit the project webpage: [www.pvtechnology.ucy.ac.cy/projects/aid4pv](http://www.pvtechnology.ucy.ac.cy/projects/aid4pv).



**End of announcement**

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