## SAPIENZA STUDENTS: WINNERS OF 2015 INTERNATIONAL SPACE APPS CHALLENGE
*CROPP Project - Cultures Risks Observation & Prevention Platform - is on NASA's website as a finalist for the global awards!*

From a voice and gesture command system for spacecraft, to an app that provides farmers information about their crops' health, this year's winners of the International Space Apps Challenge cover a wide range of technology solutions for space exploration and life on Earth.

The **International Space Apps Challenge** is a two-day hackathon where teams of technologists, scientists, designers, artists, educators, entrepreneurs, developers and students across the globe collaborate and engage with publicly available data to design innovative solutions for global challenges. NASA, in conjunction with other space agencies around the world, held the fourth annual code-a-thon at more than **135 locations worldwide** and the results are in.

Winning apps were selected for **six categories** (Best Use of Data, Best Use of Hardware, Best Mission Concept, Galactic Impact, Most Inspirational, People's Choice Award).

**Here, a team of students from Sapienza University of Rome won the "Galactic Impact" Global Award with their "CROPP" project.**

**CROPP (Cultures Risks Observation and Prevention Platform)** is an easy and user-friendly application designed to help farmers in monitoring their lands. The service will provide data gathered at two different levels. The aim is to provide farmers information about their fields' health status. The monitoring includes local sensors for short-term measurements and optical and radar imaging, acquired from satellites. Eventually the data are exploited to study the macroscopic evolution of any dangerous phenomena.

In addition to the general atmospheric factors, **the winning team focused on a severe plague for agriculture in several countries: insects invasions.**

Several sensors are stored in a small and low-cost device called Distributed Measurement Device (DMC). All the dmds of the interested area communicate via radio signals to the Data Collection Center (DCC), which is directly connected to the main server and updates data regularly. The user can access this service through a smartphone app and a website which provide simple and straightforward advices to help the management of the field. In case of critical situations, the app is able to send an alert notification and the farmer himself can upload a feedback (text or image) to inform neighboring farmers about the problem.

The macroscopic observation uses an already existing satellite constellation in order to minimize costs. The results are then compared to reference environmental conditions and an output is used to indicate the progression of an eventual disease. **Knowing the pests spread in advance can considerably help farmers contain its destructive consequences, and could also be useful to scientists as a model for future predictions.**

For more information

- View the project presentation
- See the video
- Visit CROPP Team Facebook page