

# ACCESS TO SPACE FOR ALL



UNITED NATIONS  
Office for Outer Space Affairs

# Space Applications Section

Theory

Practical

Advisory

Conferences  
Workshops  
Training

Regional  
Centres  
Fellowships

Space4Water

Curricula

Access to  
Space for All

Open  
Universe

Dark Skies  
Informal  
SSC

CoP

Data  
dissemination



## 4 QUALITY EDUCATION

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



Among others targets:

*“By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship”*

There is no technological innovation without education

Education contributes to the economy



*The goal of the **Access to Space 4 All Initiative** is to provide research and orbital opportunities for UN Member States to access space and to ensure that the benefits of space, in particular for sustainable development, are truly accessible to all*

## Why Access to Space for All?

- ❑ You cannot learn to ride a bike by reading a book, **you have to ride a bike!**
- ❑ Cooperation: opportunities foster cooperation and exchange of knowledge between countries
- ❑ Future: It is impossible to think in a future where space does not play a role!
- ❑ Jobs: Cutting edge skills
  - ❑ Space employment hit 8 year high
  - ❑ Launch activity reach decade growth of 39% (about two launches a week in 2019!)
- ❑ More than 80 countries have put a satellite in orbit (and counting!)
- ❑ Bridge the Space Divide in a responsible and sustainable manner
  - ❑ A clear path to develop capacity: Capacity from A to Z
  - ❑ Sustainable and Responsible

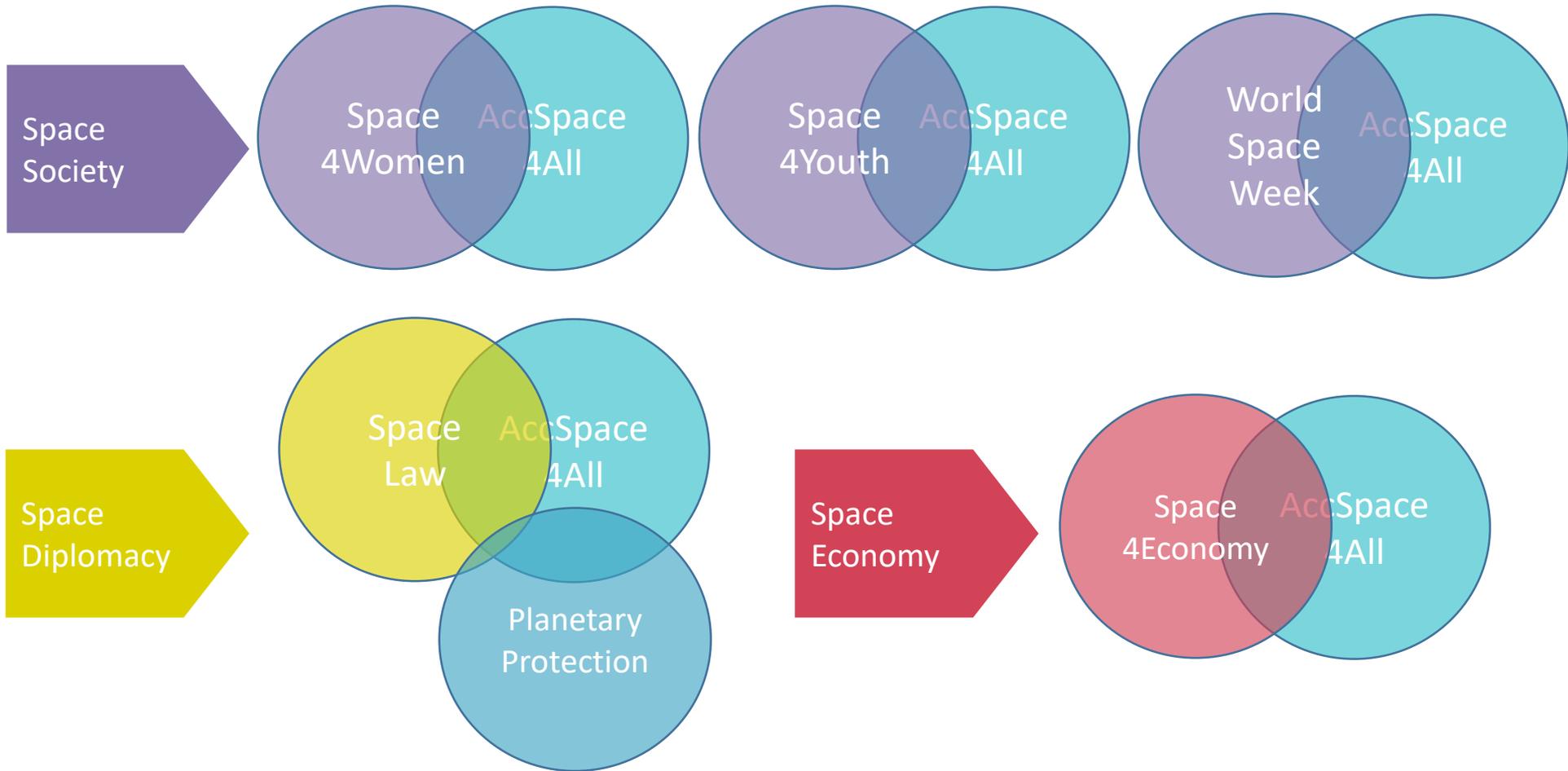


# Serie de Webinars sobre Access to Space for All

	Webinar Title	Learners will be able to	Date
COMMON WEBINARS TO ALL OPPORTUNITIES	Access to Space 4 All	<ul style="list-style-type: none"><li>- describe the Access to Space 4 All Initiative and why it is important</li><li>- describe the objectives of the Access to Space 4 All Initiative</li><li>- list the tracks</li><li>- list the opportunities</li><li>- list the partners of the Access to Space 4 All Initiative</li></ul>	30 September 2020
	How to raise awareness and engage the audience about your project	<ul style="list-style-type: none"><li>- prepare a successful communications plan</li><li>- approach media and permanent missions to raise awareness</li></ul>	28 October
	Space Law and Regulations	<ul style="list-style-type: none"><li>- to enhance understanding of fundamental principles of space law</li><li>- to understand the importance of space object registration</li><li>- describe the steps for frequency registration</li></ul>	11 November
	Ask a winner	<ul style="list-style-type: none"><li>- incorporate lessons learned from previous winners for example solutions and difficulties when undertaking their projects</li></ul>	25 November
	Artificial Intelligence and Access to Space	<ul style="list-style-type: none"><li>- Describe some of the tools that have been made possible by artificial intelligence and how they can be used in the context of Access to Space 4 All</li></ul>	02 December (TBC)
	Space Engineering Basics	<ul style="list-style-type: none"><li>- describe the different phases of the space engineering process at high level</li><li>- describe the different reviews at high level</li><li>- apply to the development of a system</li></ul>	Date TBC



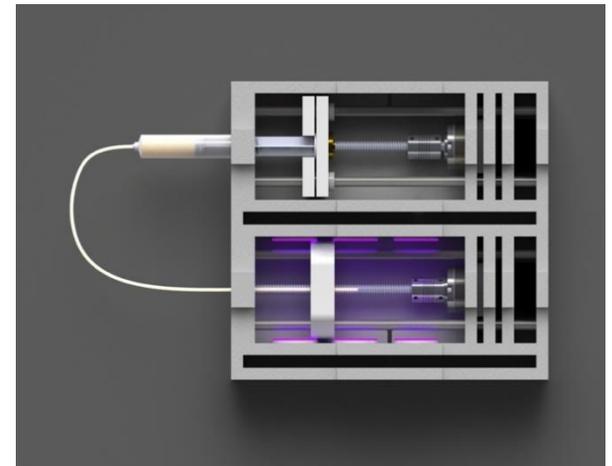
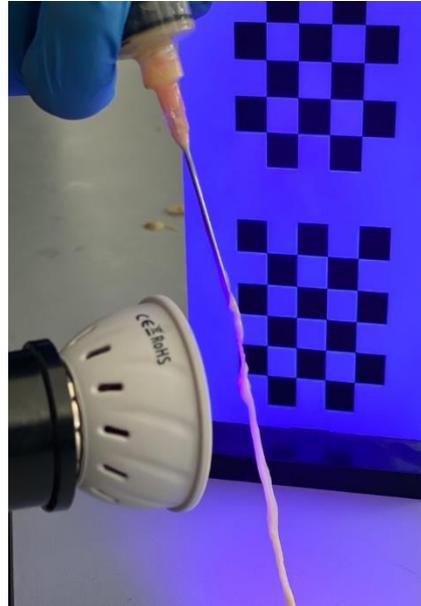
# Synergies



# DropTES



# DropTES



## Top Facebook posts by total post reach (number of people who have seen the content)

Post Message

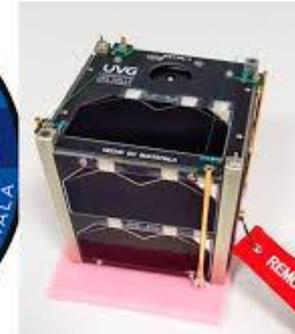
Reach ▾

The latest winners of the #DropTES fellowship with #UNOOSA to perform #microgravity research at the #Bremen Drop Tower in #Germany are a team from Universidad Católica Boliviana "San Pablo" and they are already working on their experiment! Together with industry partner Print3D #Bolivia, the 5 team members are conducting research on #3Dprinting under #microgravity conditions, that could benefit manufacturing techniques for both #space #exploration & life on Earth!

24,565



# KiboCUBE



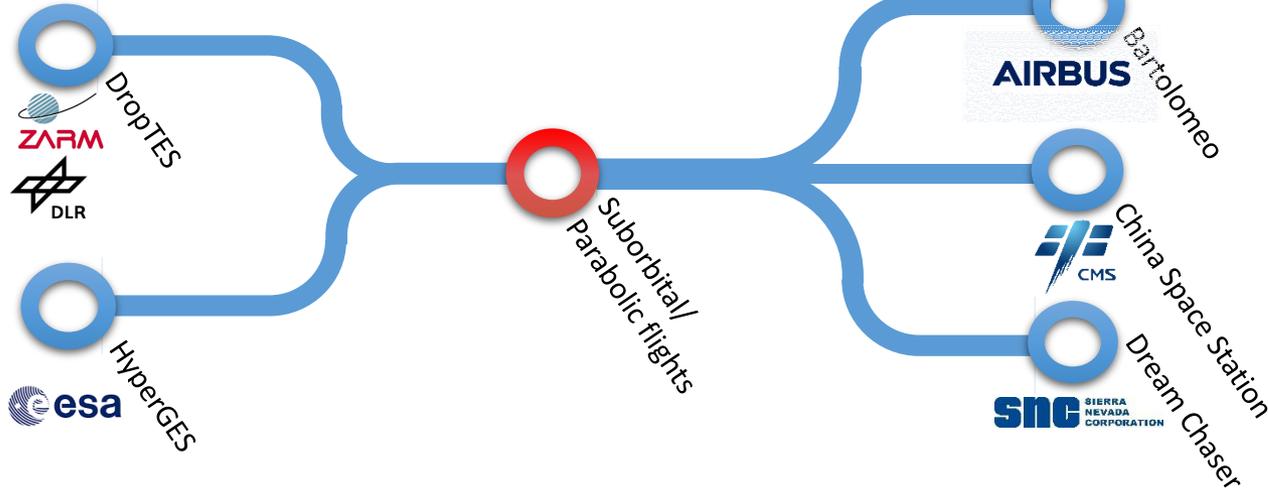
Credit: Ivan Castro



# What is the role that AI can play?



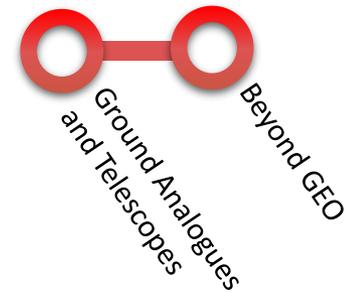
### HYPERGRAVITY/MICROGRAVITY TRACK



### SATELLITE DEVELOPMENT TRACK



### EXPLORATION TRACK

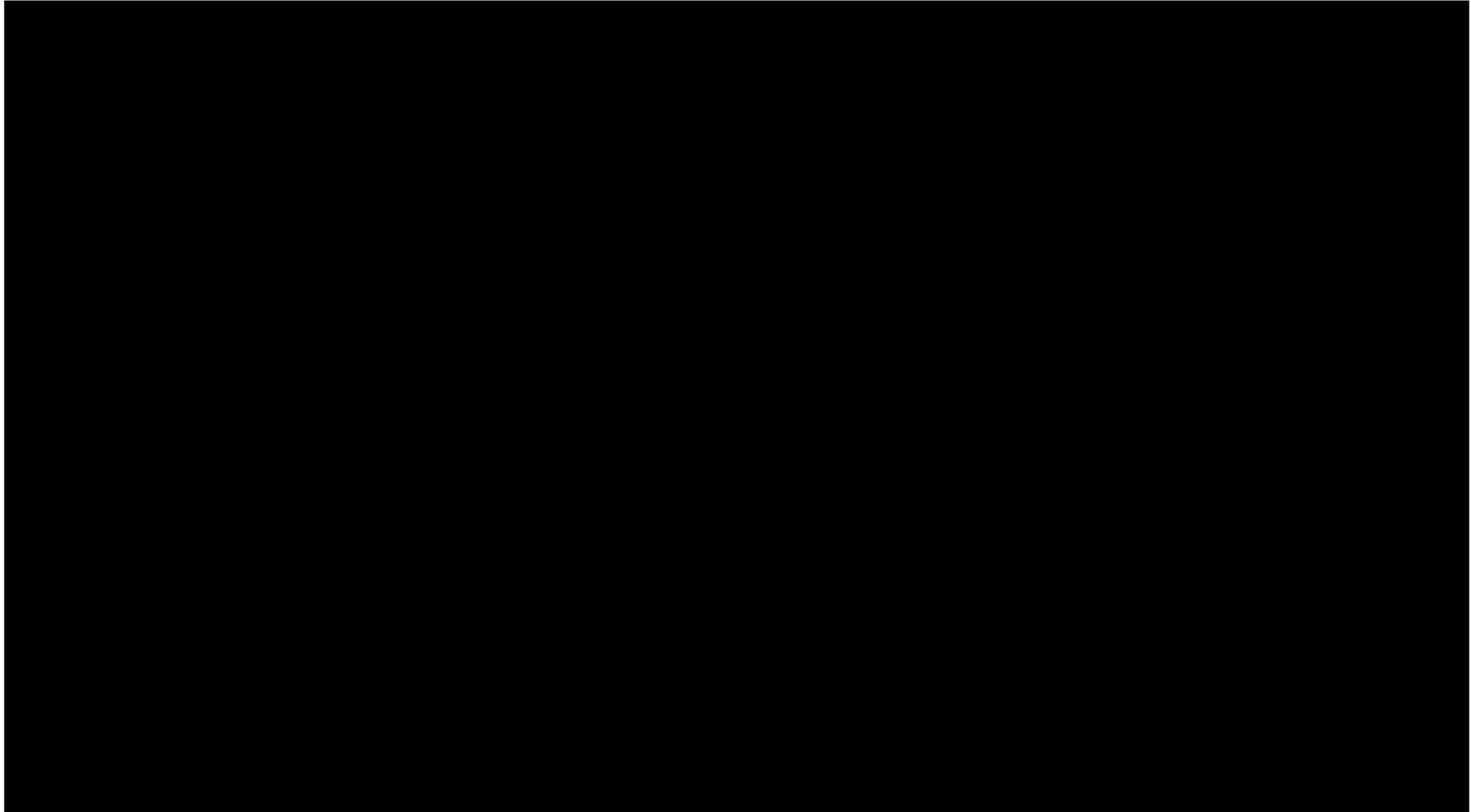


#AccSpace4All

■ Active opportunities

■ Identified gaps

# Access to Space For All



European Workshop on On-Board Data Processing (OBDP2019)



European Workshop on  
On-Board Data Processing  
cnas OUR esa

ID de la contribución: 37

Tipo: Oral presentation

## Preliminary On-board Image Processing Solution for the H2020 EO-ALERT Project

martes, 26 de febrero de 2019 14:40 (20 minutos)



APPLICATIONS

# Artificial Intelligence for Earth observation

322 VIEWS 0 LIKES

ESA / Applications / Observing the Earth /  $\phi$ -sat

$\phi$ -sat-1, pronounced phisat-1, is artificial intelligence technology carried on one of the

lite  
ytec  
wel

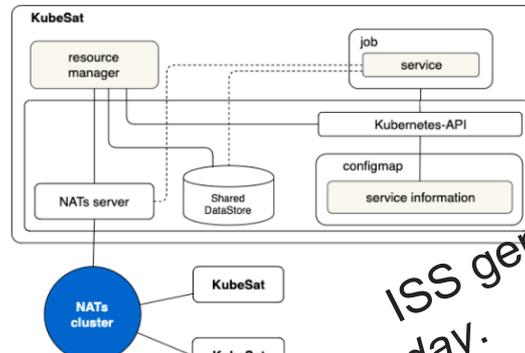
## KubeSat

KubeSat is an open-source project for building a cognitive, autonomous framework for satellite constellations and swarms. It provides the framework needed to develop and operate tasks to be performed on Satellite. Also, it allows for the simulation and optimization of multi-satellite communications.

### How It Works

KubeSat provides a framework to manage services for devices.

### Architecture



ARTIFICIAL INTELLIGENCE  
IN SUPPORT TO SPACE  
TRAFFIC MANAGEMENT

ISS generates around 28TB of data every day.

**THANK YOU**



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