

# Hepta Sat Mission

By

Dr. Ayman Kassem



## Mission Statement:

**Estimating Impact-Force of a Re-entry Vehicle  
For Hazardous Analysis and Structure  
improving**



# **I will use Measures of Attitude, Position and Impact sensors**

## **1- Minimum Success mission**

9 axis sensor running and saving measurements to SD.

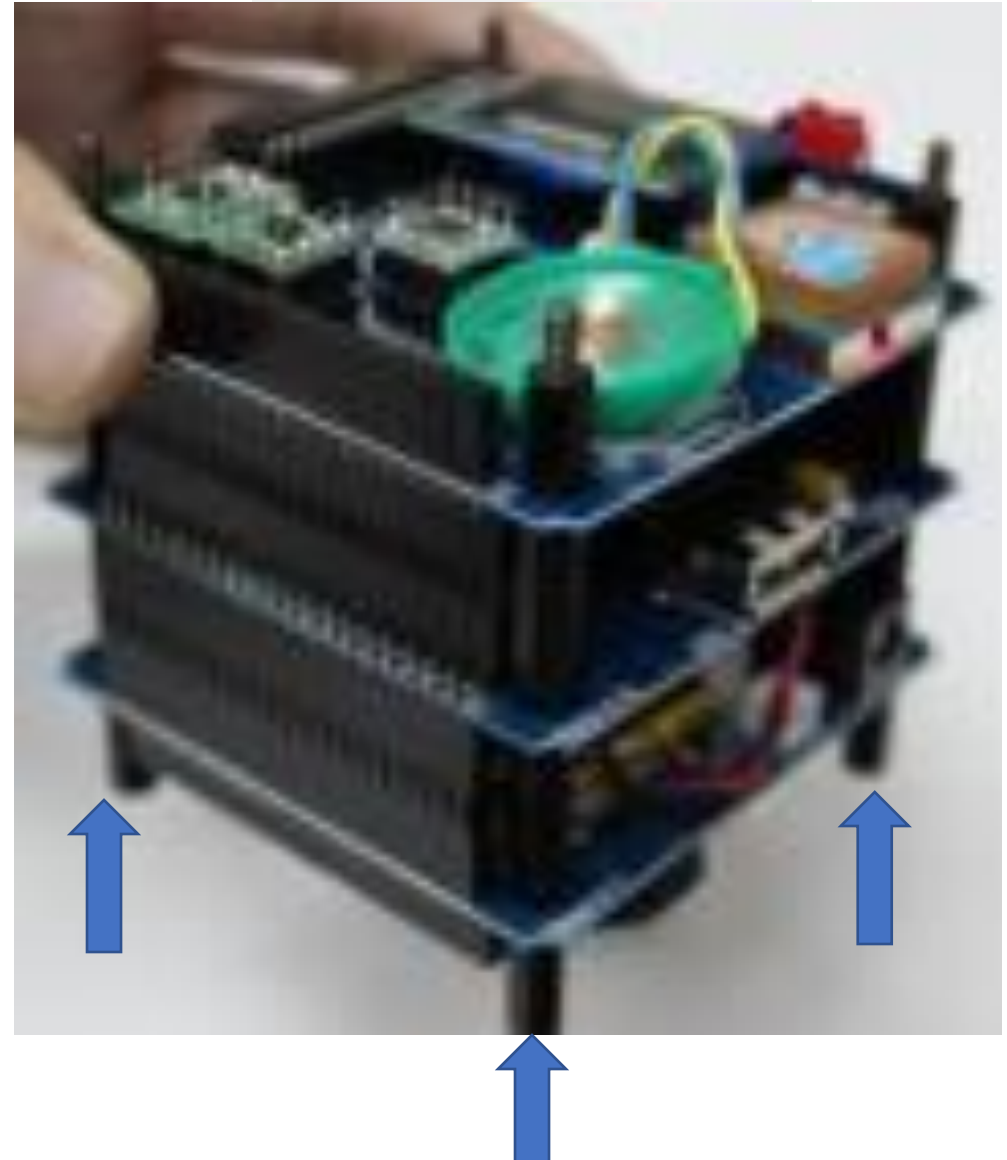
## **2- Success mission**

9 axis sensor running and transmitting measurements to ground station.

### 3- Extra Success mission

#### Ground Impact Force Estimation

- 1- Using Force Sensing Resistors (FSR) connected to bottom of the satellite.
- 2- When the satellite hits the ground, it will estimate the sequence of hitting the ground and the loads on the four spacers.
- 3- These forces can be supplied to a FE model of the satellites to estimate stresses and strains.





thank  
you