



# FLORIDA SPACE GRANT CONSORTIUM FUNSAT COMPETITION



## Objective

Design a CubeSat and present documented design while also building the satellite for the FUNSAT competition.

## Design Implementations

- Frame dimensions 30 cm x 10 cm x 10 cm
- The use of a Solar Sail as a form of propulsion
- A high mega pixel camera will be used to take photos in day light as well as during the instances in which there will be no sunlight
- The use of Aluminum 6061 T6 for structural rigidity, environmentally friendly, and cost effective.
- Applying weight reducing techniques for a lightweight design and maintain simple machining processes

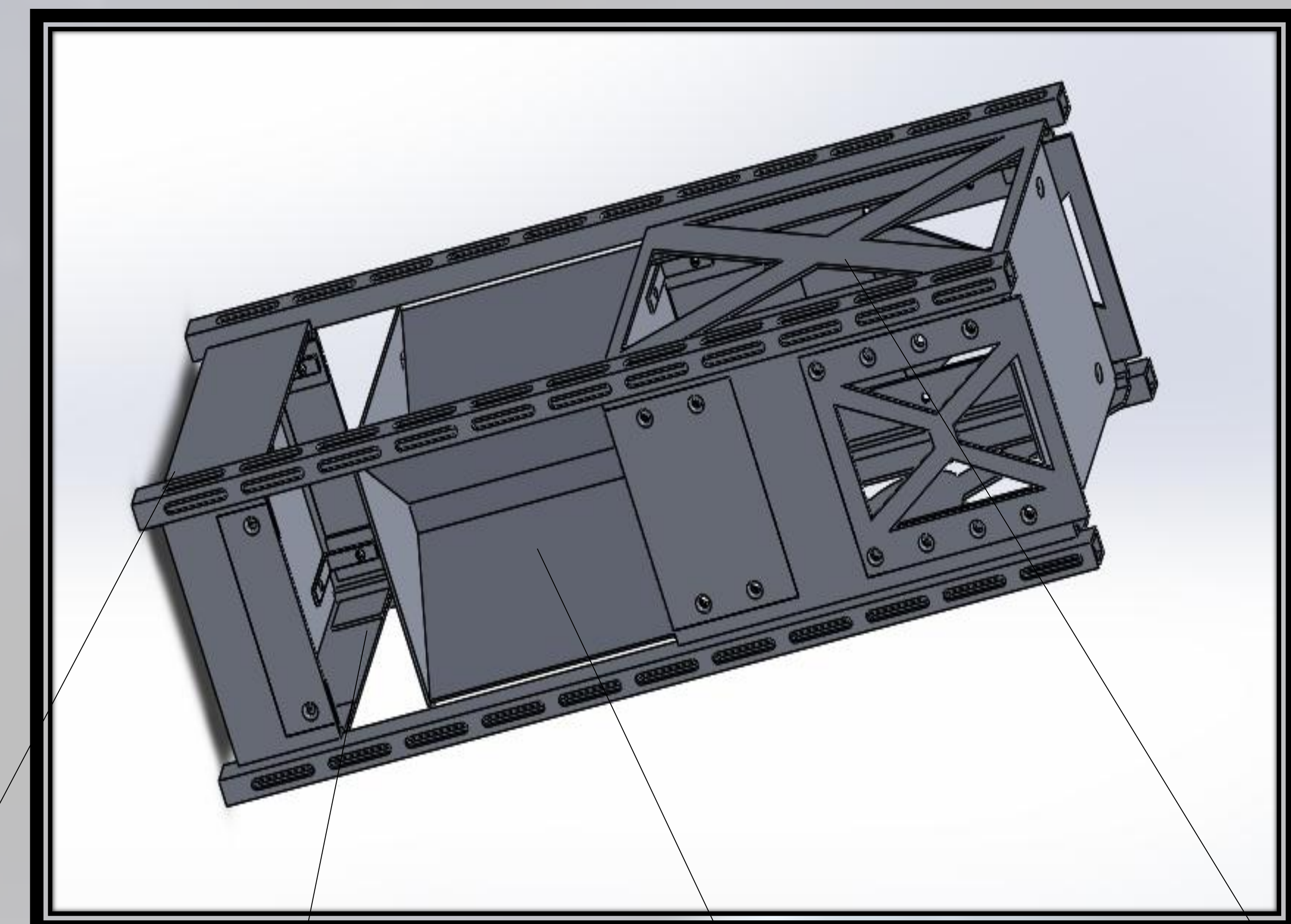
## Motivation

The opportunity to represent FIU and work on a project with the possibility of having it launched into low earth orbit.

## Project Timeline

|                           | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 |
|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Project Discussion        |        |        |        |        |        |        |        |        |        |        |        |        |
| Research                  |        |        |        |        |        |        |        |        |        |        |        |        |
| Initial Design            |        |        |        |        |        |        |        |        |        |        |        |        |
| 3D Modeling & Simulations |        |        |        |        |        |        |        |        |        |        |        |        |
| Final Design              |        |        |        |        |        |        |        |        |        |        |        |        |
| Obtain Materials          |        |        |        |        |        |        |        |        |        |        |        |        |
| Manufacture Prototype     |        |        |        |        |        |        |        |        |        |        |        |        |
| Prototype Testing         |        |        |        |        |        |        |        |        |        |        |        |        |

## Chassis Design



Structural  
Rails

Sail Deployment  
Housing

Sail Storage  
Compartment

Electrical  
Compartment

## Team



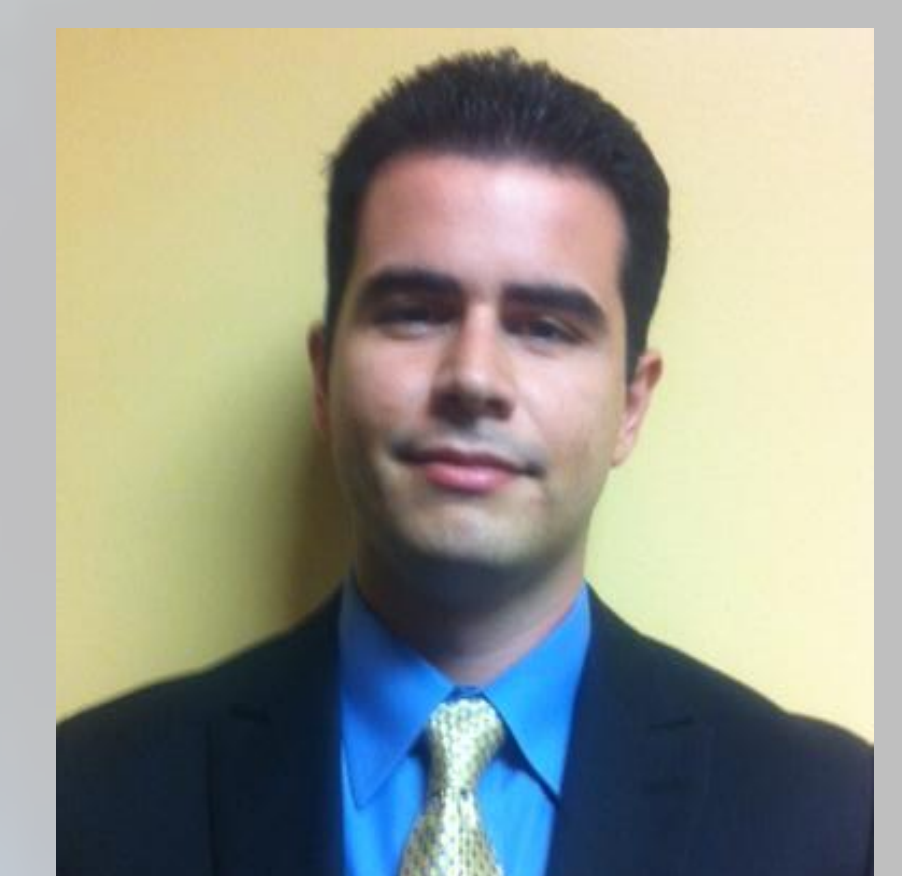
Gonzalo  
Vivanco



Giampiero  
Revelo



Luis  
Fernandez



Henry  
Vazquez

Advisor: Ibrahim Tansel

Mentor: Pradeep Shinde