

# ARLISS 2014 – COMEBACK COMPETITION

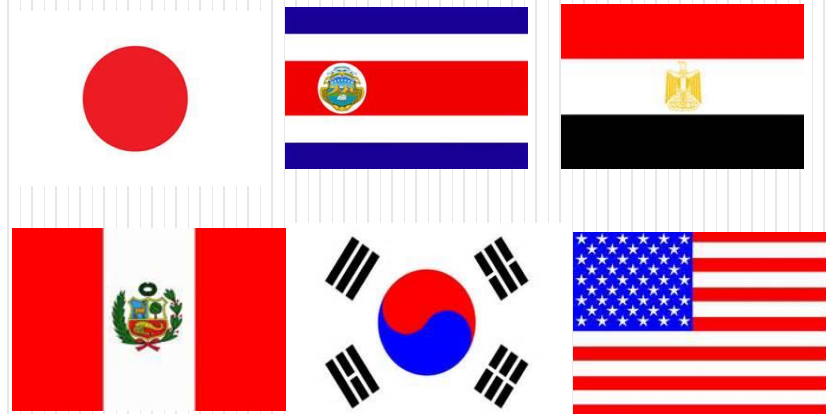


## CANSAT PERU TEAM – UNIVERSIDAD NACIONAL DE INGENIERIA

### MEMBERS OF THE TEAM

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MIYAGUSUKU RÍOS RENATO  
CALLE BUSTINZA FREDY

### BLACK ROCK – NEVADA – SEPT. 7-12

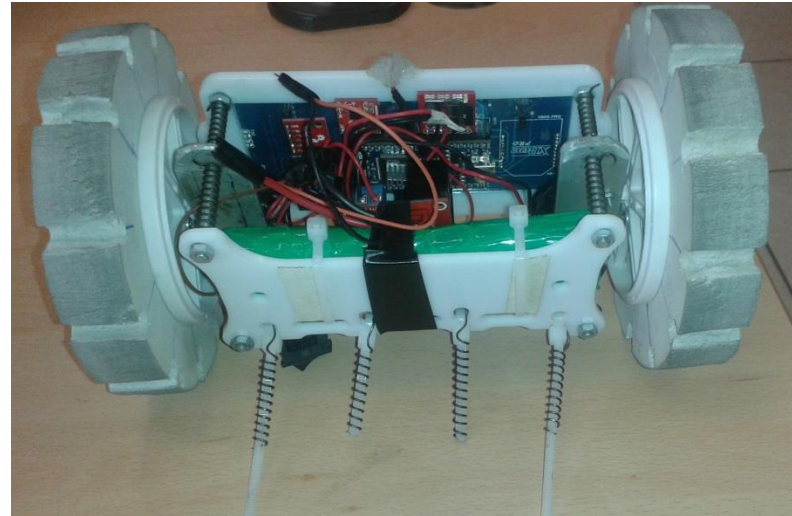
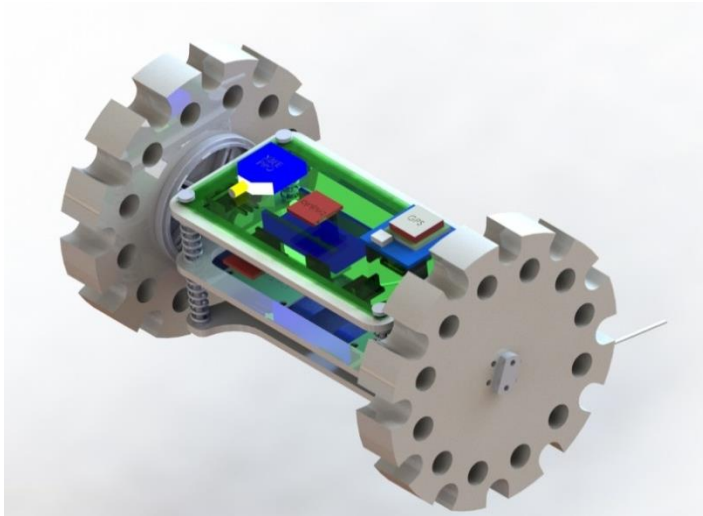


UNIVERSIDAD NACIONAL DE INGENIERÍA  
CENTRO DE TECNOLOGÍAS DE INFORMACIÓN Y COMUNICACIONES  
INSTITUTO GENERAL DE INVESTIGACIÓN

CTIC – IGI UNI

# ROVER DESIGN

## - MECHANICAL



Material of the structure:

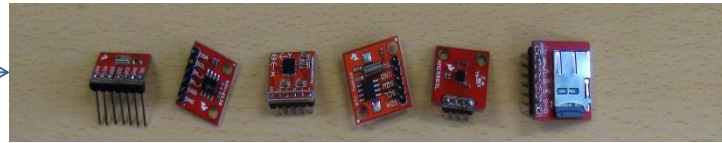
- Wheels made from microporous
- Acrylic – ABS
- Nuts and Bolts

# ROVER DESIGN

## - ELECTRICAL – ELECTRONICS

### SENSORS

- Pressure
- Temperature
- Altitude
- Humidity
- Etc



### MICROCONTROLLER

- MBED



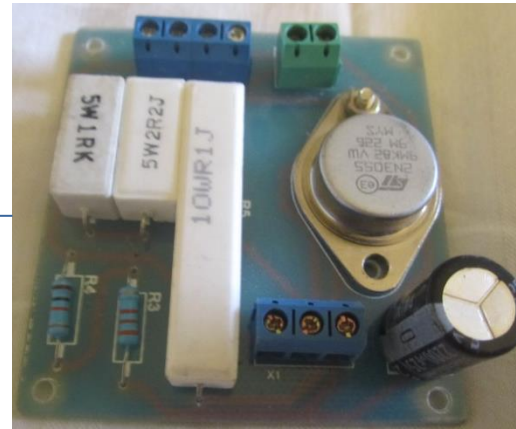
Material of the boards:

- Fiberglass

# ROVER DESIGN

## - ELECTRICAL – ELECTRONICS

Board made in order to increase the current which pass through the nicrom wire which cuts the wire of the parachute



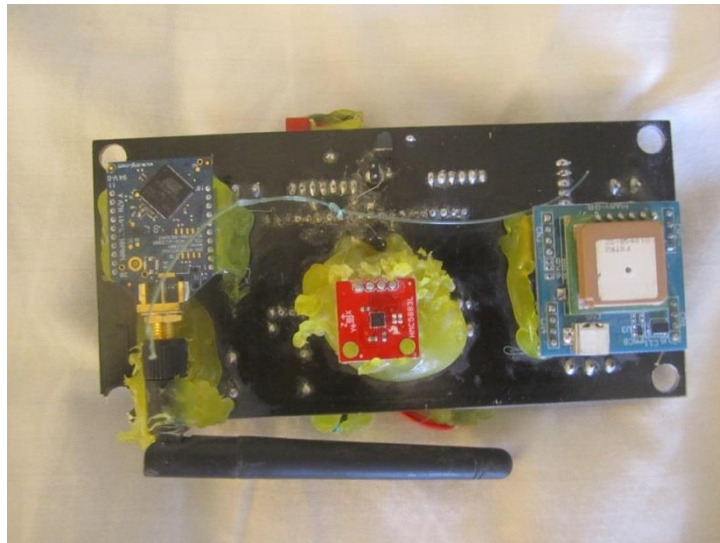
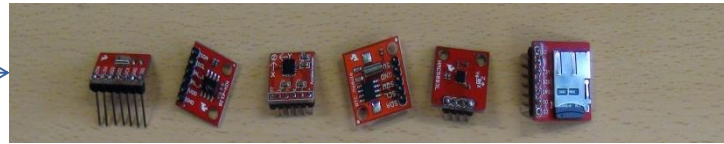
LIPO Batery as source of energy



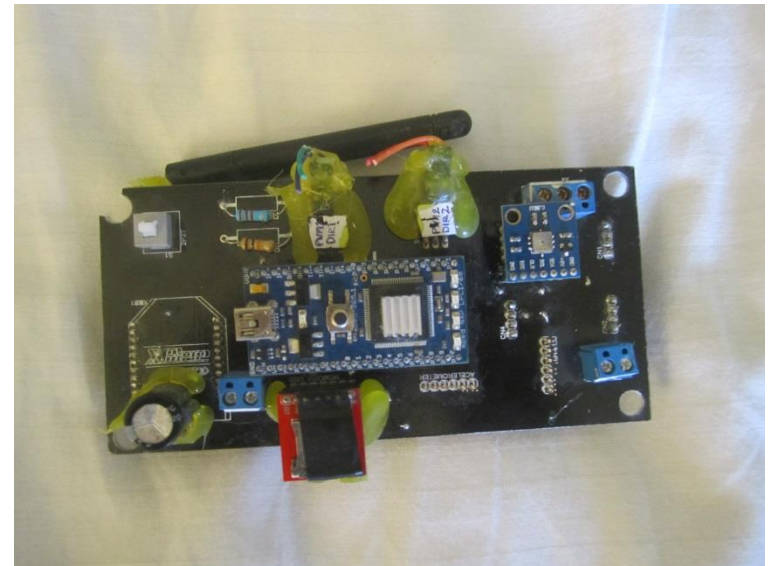
# ROVER DESIGN

## - ELECTRICAL – ELECTRONICS

SENSORS



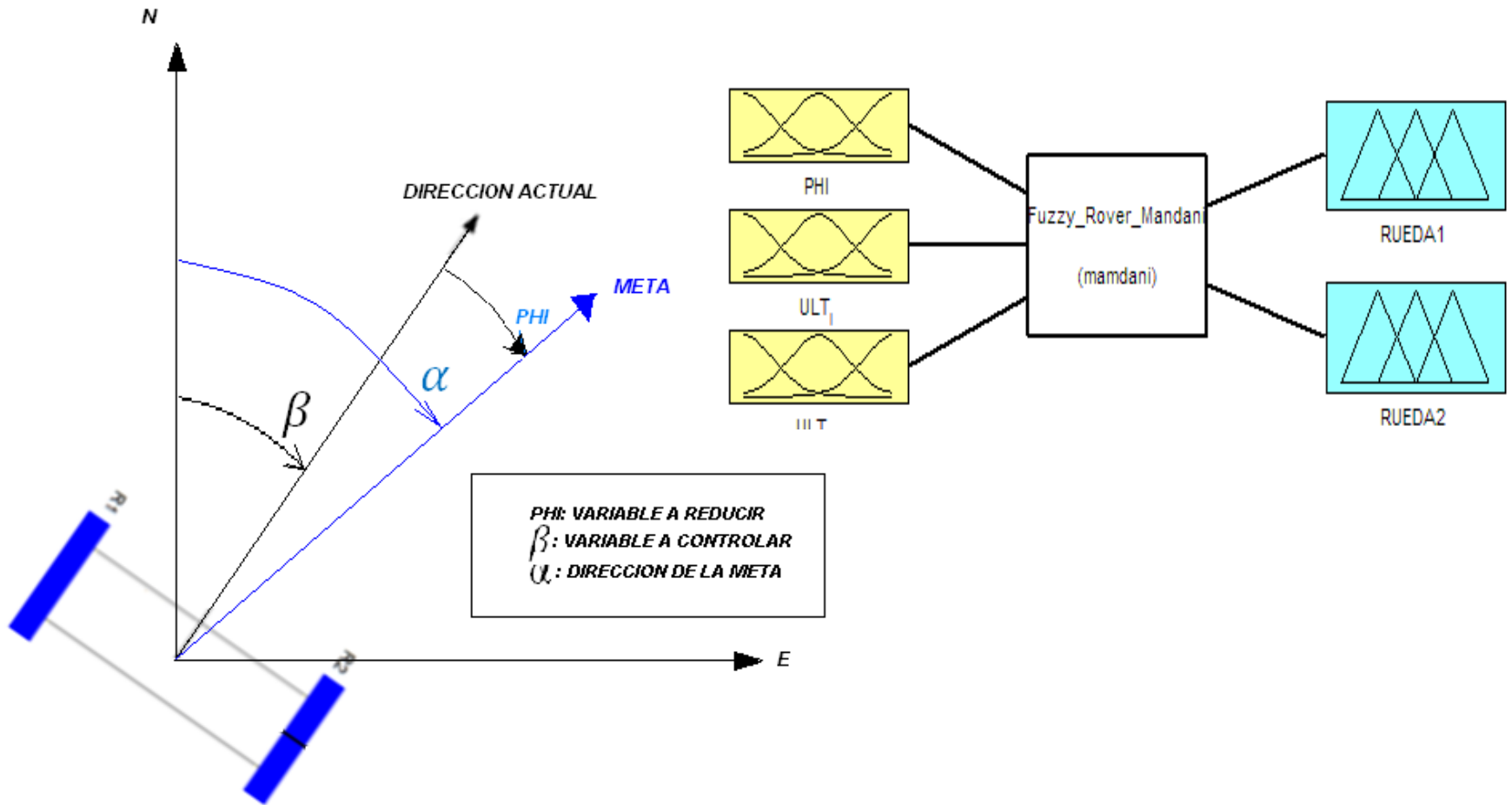
TOP VIEW - compass , xbee ,  
GPS and heat wire



BOTTOM VIEW – mbed,  
memory sd card and sensors  
(BUS I2C).

# ROVER DESIGN

## OUR NAVIGATION ALGORITHM



# OUR MISION AND RESULT



- Test of the navigation algorithm for automatic regulation of motors rotation.

→

- 1st

Landing point : About 6000m, retire

→ mission failed flight



WITH A BETTER DESIGN OF THE SEPARATION SYSTEM OF THE PARACHUTE, WE COULD COMPLETE THE MISSION

# Acknowledgements

Aeropac members

Unisec members

Prof. Jose Oleden

Our Team members

CTIC lab members:

Erik Alvarez,

Jhair Gallardo,

Richard Cotrina,

Erwin Dianderas,

Kevin Rojas,

Emanuel Mendoza

Juan carlos huamani

Yomar Sinchitullo

Jose Hoyos

Ing. Margarita Mondragon

Giovany mondragon





THANK YOU VERY MUCH  
ALL AEROPAC MEMBERS AND UNISEC- CANSAT!

