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SPACE

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Come and join us in Barcelona, Spain to learn about the recent trends and advances in the trajectory of space science and technology. An international, interdisciplinary venture for advancing your career beyond the horizon.

17 - 21 JULY 2018

UPC – BARCELONA TECH, CAMPUS NORD

ORGANIZED BY: COMMENSE LAB , TELECOM BARCELONA AND R8 YOUNG PROFESSIONALS

IMPORTANT DATES

- Feb 15, 2018 to April 15, 2018
  Early Bird Registration
- April 15, 2018 to June 15 ,2018
  Regular Registration
- June 1, 2018
  Sponsorship Deadline

Early Bird: **200€** Regular: **275€**

(Includes lunches and coffee breaks for all days, materials for lab sessions and transportation to launch site on July 21st. Accommodation is not included.) **Certificates will be provided.**

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region IEEE 8

CommSensLab

EXCELENCIA MARÍA DE MAEZTU

TRIPOLI SPAIN

laSalle RàdioClub

GRSS

KEY TOPICS

DYNAMICS

Modeling orbits and spacecraft position, velocity, and attitude for Earth observations using orbitron software.

SPACE ENVIRONMENT

Understanding differences between designs for terrestrial and space applications with a focus on thermal control systems modelled using Matlab Princeton Satellite Toolbox.

SPACE AVIONICS

Principles for data handling and communications for spacecrafts highlighting protocols, analog sampling, and scheduling emulated using Arduinos.

ALTITUDE DETERMINATION AND CONTROL

Combining principles of orbital dynamics and control systems to use sensors and actuators for pointing the spacecraft. Emulated using Arduinos with peripheral sensors.

POWER SYSTEMS

Acquisition, storage, and distribution of power for spacecrafts with accompanying lab sessions using solar cells and battery chargers.

TELEMETRY AND COMMAND INTERFACES

Calculations of link budgets for Earth-to-Space communications. Testing protocols, modulation techniques, and data transmissions through hands-on laboratory experiments.

COMMUNICATION ANTENNAS

Design and implementation considerations for high directivity antennas. with

SPACE SYSTEMS

Principles of space systems design for different types of missions ranging from nanosatellites to large Earth orbservation spacecrafts.

SPACECRAFT SYSTEMS

Interdependencies of spacecraft design evaluated through concurrent design principles.

LAUNCH AND OPERATION

Launching of rockets to teach principles of ground operations, tracking, and operation of payloads remotely.