

INTRODUCTION TO CRAS –SAPIENZA

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Centro di Ricerca Aerospaziale Sapienza (CRAS)



SAPIENZA
UNIVERSITÀ DI ROMA

Aerospace Research at University of Rome La Sapienza

The University of Rome “La Sapienza” has a long term tradition in aerospace research, with many pioneers of the Italian Space activities.

It is worth to remind that Italy was the third country in the world, after USA and Russia to be able to put in orbit a satellite, thanks to a group of Professors led by Luigi Broglio, with the important contribution of Carlo Buongiorno-

This activity has been continuously developing in time with the successful participation to many international Projects, like Cassini, Mars Express, Vega.

From last year La Sapienza decided to renew his organization of both didactic and research activity.

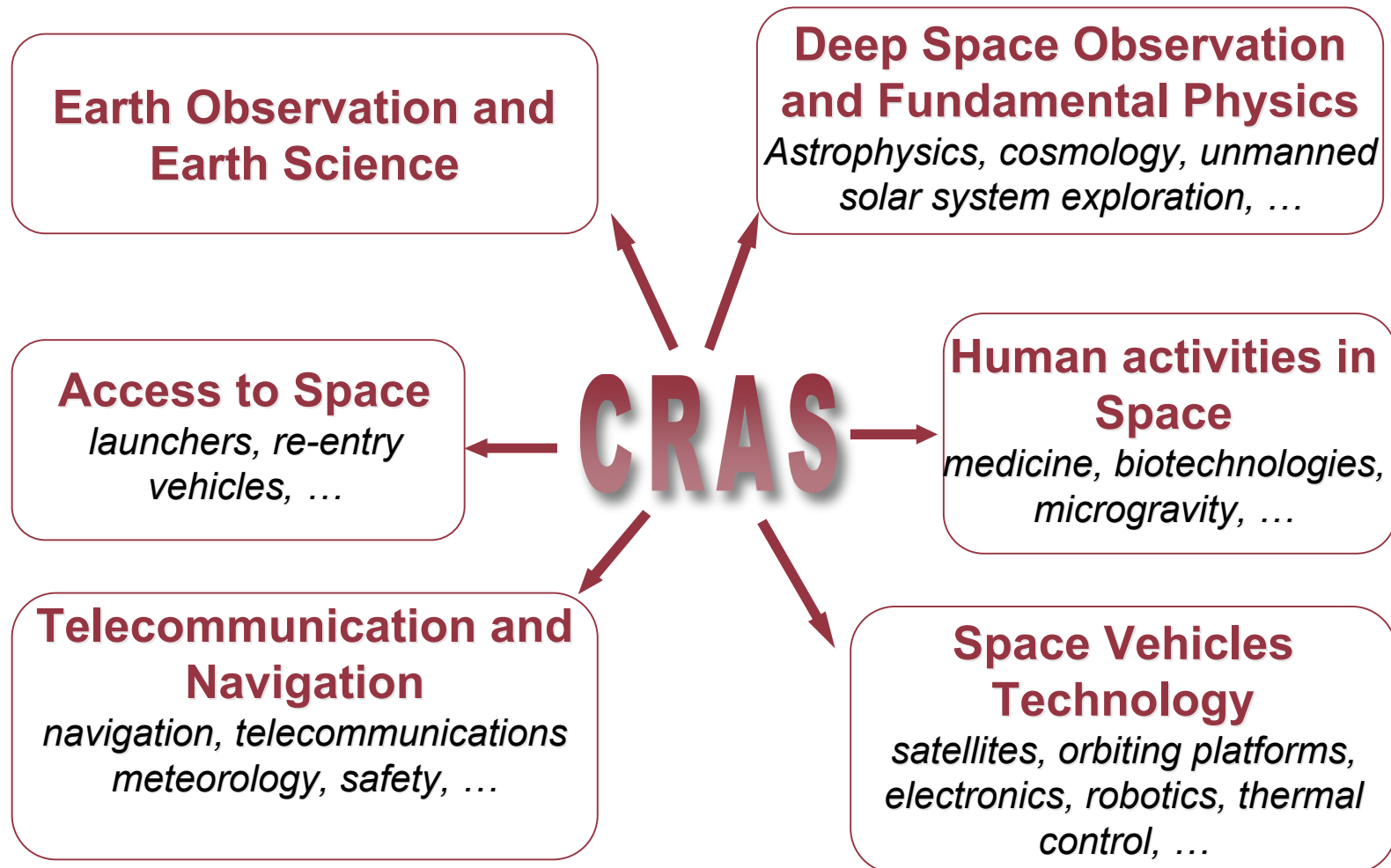
On June 2009 it has been activated the New Faculty of “Ingegneria Aeronautica e dello Spazio”

- **Courses:**
 - Fundamental Aerospace Engineering (three years)
 - Laurea Magistrale (two years) in “Aeronautical Engineering”
 - Laurea Magistrale (two years) in “Space Engineering”
 - Laurea Magistrale (two years) in “Engineering of Electronic Systems and Aerospace Telecoms”
 - Two Masters (one year with stage in industries in “Space Transportation Systems” and “Satellites and Space Platforms”
 - PhD School in Aerospace Technologies (three years)
- 1400 Students
- 130 Diploma/year (Fundamental) __ 100 Degree/year (L. Magistrale)
- 60 courses specific of the aerospace field
- 40 professors in specific aerospace topics

Aerospace Research Center of Sapienza (CRAS) at University of Rome

- **CRAS has been founded in June 2008 gathering the professors of Sapienza involved in aerospace research and working in different Faculties or Departments:**
 - **Physics**
 - **Mechanics and Aeronautics**
 - **Information and Communication Science and Technique**
 - **Computer Science and Systemics**
 - **Electronic Engineering**
 - **Electrical Engineering**
 - **Aerospace Engineering and Astronautics**
 - **Experimental Medicine**
 - **Chemistry**
 - **Chemical, Materials, Raw materials and Metallurgical Engineering**
 - **Hydraulics, Transports and Roads**

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CRAS wants to improve its international relationships with the participation to bilateral Programs

Many of its scientist are deeply involved in some of the main International Space Programs.
Just to provide non exhaustive examples:

- **Mars Exploration**, with the group led by **G. Picardi** which first discovered trace of water under the Mars surface
- **The astrophysics studies** performed by **P. DeBernardis**
- **Cassini and Titano missions** with the group led by **L. Iess**
- **Vega, Solid Rocket Motor ESA Program** with the participation of the group led by **M. DiGiacinto**
- **SAR radar development** which made the **the CosmoSkyMed Program** the most advanced international application of dual technology for earth observation programs, led by **T. Bucciarelli and P.F. Lombardo**
- **Rocket Liquid Propulsion by LOx-Methane Engines**, with the group led by **M. Onofri**
- **Materials and Smart Structure Studies**, with the groups led by **T. Valente** and by **P. Gaudenzi**
- **The ESA IXV Re-entry vehicle** project with the participation of the group led by **M. Onofri**
- **The robotic and artificial intelligence applications** performed by the groups of **D. Nardi** and **S. Monaco**
- **The earth observation applications** led by **M. Pierdicca** and **F. Marzano**