Seminars or workshops can be organized by professors of CRAS-Sapienza, either in Beijing following a specific invitation by CASC side, or in Rome for Chinese researchers and PhD students.

The list of topics presently available includes (further detail can be given at request):

Earth Observation

1- Mini courses on

- **Distributed, Multichannel and MIMO SAR-Synthetic Aperture Radar** *(Prof. P. Lombardo)*
- **Italian production of multispectral image detectors in CMOS technology for space applications: from terahertz, to visible to X ray** *(Prof. F. Palma)*
- **Free space laser optics for terrestrial and satellite links** *(Prof. F. Marzano)*
- **Introduction to satellite systems** *(Prof. P. Gaudenzi)*

2- Workshop on Earth Observation Applications *(F. Marzano, M. Marsella, M. Pierdicca)*

- **Flood mapping by Cosmo SKyMed and Sentinel 1**
- **Earthquake urban damage assessment by high resolution optical and radar data**
- **High resolution soil moisture retrieval and soil moisture product validation**
- **Radar meteorology for precipitation and extreme weather nowcasting**
- **Radar and satellite monitoring of explosive volcanic eruptions**
- **SAR and visible satellite data lava for lava flow mapping and hazard scenario simulation**
- **DINSAR analysis for building damage assessment in large urban area**
- **Integration of ground-based and satellite remote sensing technique for monitoring critical infrastructure**

Rocket Propulsion

- **LOx-Methane engines for upper stage applications** *(Prof. F. Nasuti,& M. Onofri)*
- **Overexpanded Nozzles behavior in LRE and Advanced configurations** *(Prof. F. Nasuti,& M. Onofri)*
- **Model Reduction of chemical kinetics in Combustive Systems** *(Prof. M. Valorani, Prof. Francesco Creta)*
- **Pressure oscillation in Solid Rocket Motors at ignition and quasi-steady state** *(Prof. B. Favini & E. Cavallini)*

Reentry Vehicles

- **Aerothermodynamic flow prediction in complex vehicle shapes** *(Prof. R. Paciorri)*

Space Structures

- **Smart composite structures** *(Prof. P. Gaudenzi)*
- **Multiphysics analysis of structures** *(Prof. P. Gaudenzi)*
- **Experimental Structural Dynamics** *(Prof. G. Coppotelli)*
- **FEM Experimental Validation and Updating** *(Prof. G. Coppotelli)*

Interplanetary Mission

- **Recent advances in deep space navigation and planetary geodesy** *(Prof. L. Iess)*

Stratospheric Balloon Experiments

- **Stratospheric balloon experiments: suborbital technological testing support, and science, in view of future satellite ambitious missions; workshop at Sapienza University** *(Prof. S. Masi & P.De Bernardis)*
- **Internship for Chinese researcher in the balloon lab for tests with microwave instrumentation***(Prof. S. Masi & P.De Bernardis)*

Mini courses on Concurrent engineering for space systems *(Prof. P. Gaudenzi)*

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