



UNIVERSITÀ  
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Dipartimento di  
Fisica



# PhD Program in Space Science and Technology - SST

## Space debris monitoring with the BIRALET radar system

### Specific Seminar – Curriculum 6

2024, June 25, 11 a.m.

#### Speakers:

Dr. Tonino Pisanu, INAF – OAC Osservatorio Astronomico di Cagliari, Selargius, Sardinia

#### Abstract:

The Italian National Institute for Astrophysics (INAF) has been involved in the European EU-SST (European Space Surveillance and Tracking - <https://www.eusst.eu/>) program for the monitoring of space debris, since its constitution. INAF builds and manages optical and radio telescopes which can be used to observe not only celestial sources but also space objects. One of the radio sensors used in EU-SST by INAF is the BIRALET (Bi-Static Radar for Leo Tracking) system, which is based on the 64 meters Sardinia Radio Telescope (<http://www.srt.inaf.it/>) used as a receiver antenna and on a 7-meters antenna used as a transmitter. The seminar will illustrate the problem of space debris for the development of the Space Economy, the functioning of the EU-SST monitoring system and a description of the BIRALET system and of the results it produced.

#### Short Bio:

Tonino Pisanu received the M.S. degree in physics from the University of Cagliari, Cagliari, Italy, in 1995. Since 2001, he has been a Technologist with the National Institute for Astrophysics (INAF), Cagliari Astronomy Observatory, Cagliari. His research interests include the analysis and design of microwave components for radio-astronomy applications, in the research and development of non-contact measuring systems for characterizing and correcting the optical shape, and the mechanical configuration of big antenna systems.

#### Online attendance:

<https://meet.google.com/soy-ovvx-vve>

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