


**2021 IEEE INTERNATIONAL WORKSHOP ON**

# Metrology for AeroSpace

**MetroAeroSpace2021**
**23-25 JUNE  
2021**
**NAPLES, ITALY**
[www.metroaerospace.org](http://www.metroaerospace.org)
**CALL for PAPERS** <<<<

 UNIVERSITÀ DEGLI STUDI DI NAPOLI  
**FEDERICO II**

 UNIVERSITÀ  
 DEGLI STUDI  
 DEL  
**SANNIO**

&gt;&gt;&gt;&gt; for the Special Session on

# SPACE ENVIRONMENT EFFECTS ON SPACE SYSTEMS

## > ABSTRACT

In order to utilize space for scientific and commercial purposes it is necessary to understand the Low Earth Orbit (LEO) space environment where most of the activities are now, and will be, carried out.

LEO environment includes severe hazards such as Atomic Oxygen (AO), Ultraviolet (UV) Radiation, Ionizing Radiation, High Vacuum, Plasma, Micrometeoroids And Debris, Severe Temperature Cycles and, for some systems, the Re-Entry Environment. It is important to note that these environmental characteristics do affect the materials and structures at the same time, with a remarkable synergistic effect.

In order to understand these synergistic effects, whether experimental or theoretical and numerical approaches are of essential importance.

Analyze and comprehend the operative environment becomes a key point to extend operative life of satellites and structures and to withstand aggressive conditions as re-entry phase is. In fact Re-entry mission evolution requires to develop reusable integrated systems, which in turns should be based on advanced materials, such as ceramic materials, able to deal with the harsh space environmental conditions. In particular, long duration missions are putting and will put aerospace vehicle structures to the test of onerous exposition, as said, to critical orbital phenomena which may seriously downgrade the materials performance and compromise a critical phase as the re-entry is.

## > ORGANIZERS

**MARIO MARCHETTI**

Sapienza University of Rome, Italy


 [mario.marchetti@uniroma1.it](mailto:mario.marchetti@uniroma1.it)

**ANDREA DELFINI**

Sapienza University of Rome, Italy

 [andrea.delfini@uniroma1.it](mailto:andrea.delfini@uniroma1.it)


## CONTACTS

 [info@metroaerospace.org](mailto:info@metroaerospace.org)
 [www.metroaerospace.org/special-session-11](http://www.metroaerospace.org/special-session-11)  
[www.metroaerospace.org](http://www.metroaerospace.org)

## SOCIAL

 [fb.com/MetroAeroSpace](https://fb.com/MetroAeroSpace)
 [twitter.com/MetroAeroSpace](https://twitter.com/MetroAeroSpace)

Visit the conference website as well as Facebook page for each specific call and additional news.