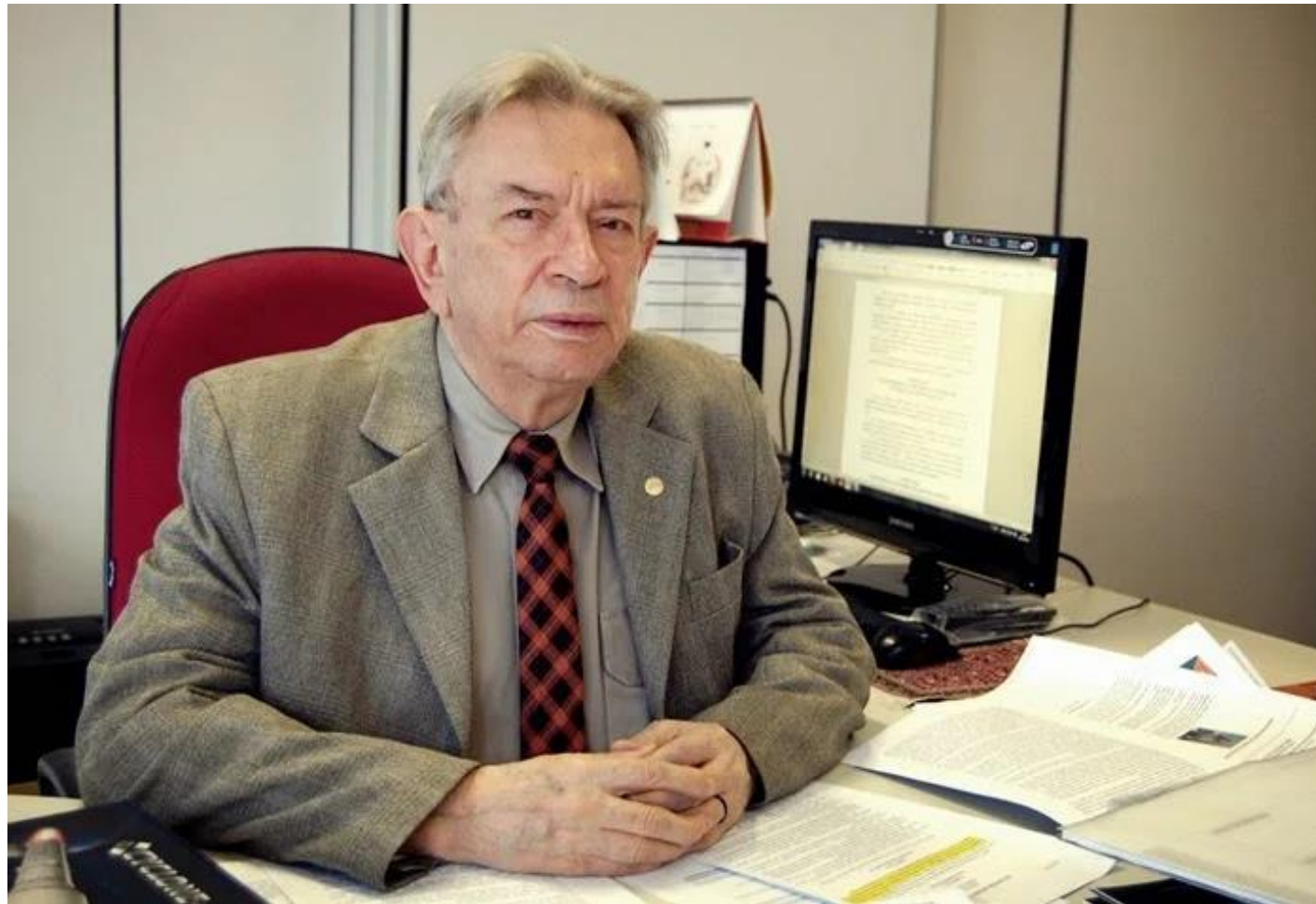


# A BRAZILIAN INSIGHT OF THE SMALL SATELLITES ERA

*Márcia Alvarenga dos Santos*



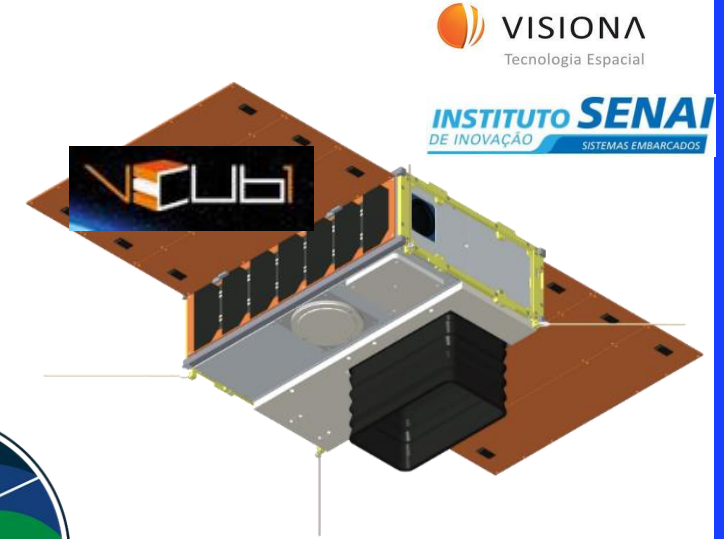
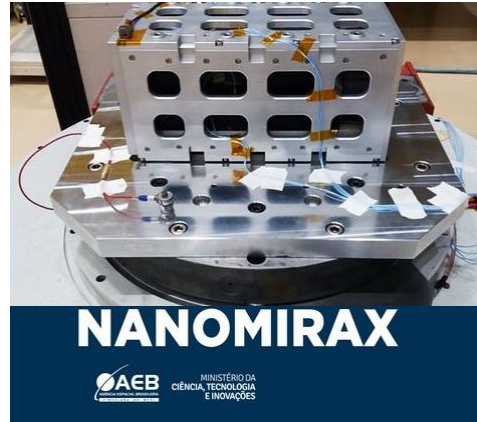
# JOSÉ MONSERRAT FILHO



# NANOSATS DEVELOPMENTS IN BRAZIL



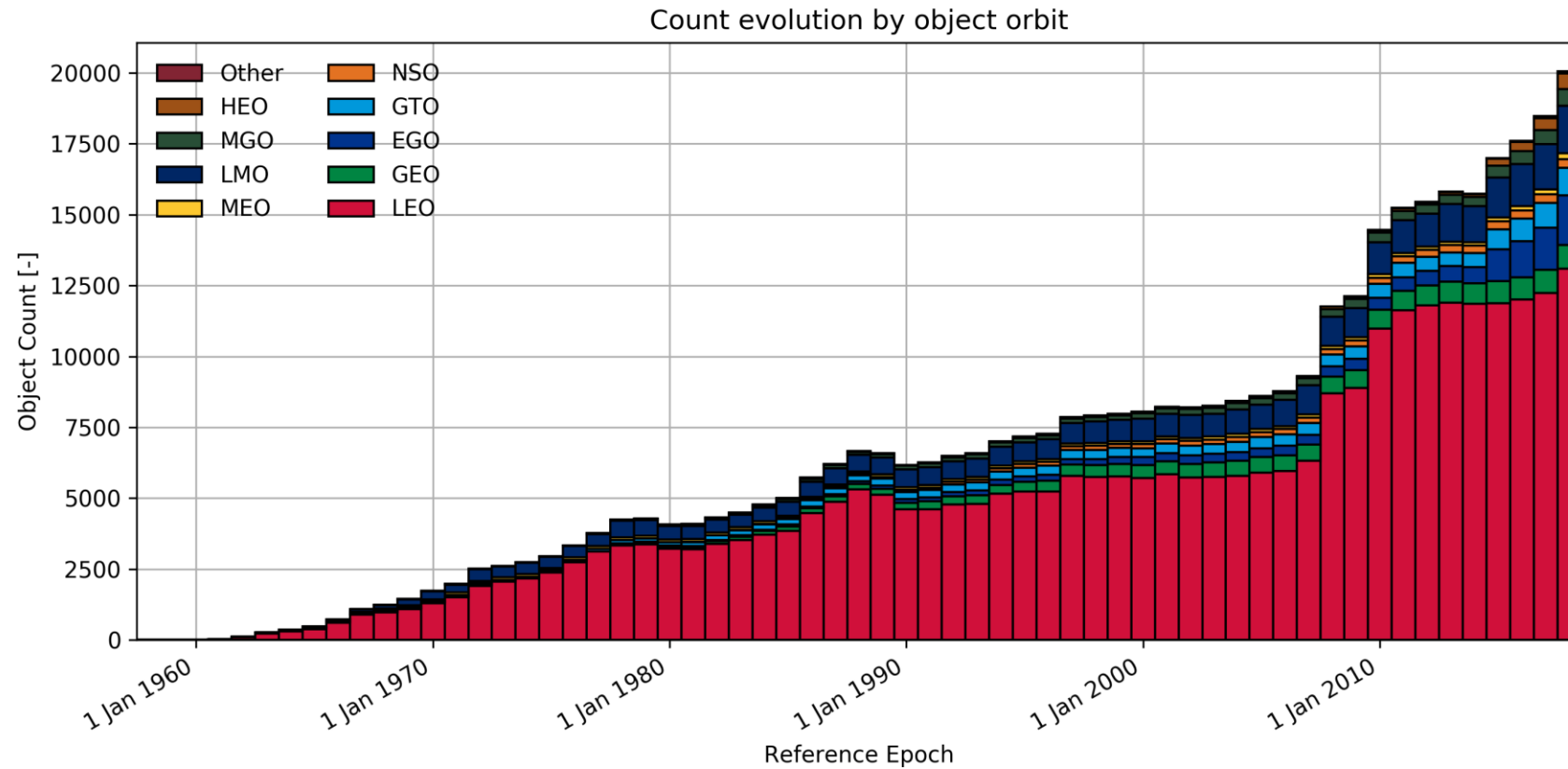
**SPORT: An international science mission using a CubeSat**



**CONASAT**

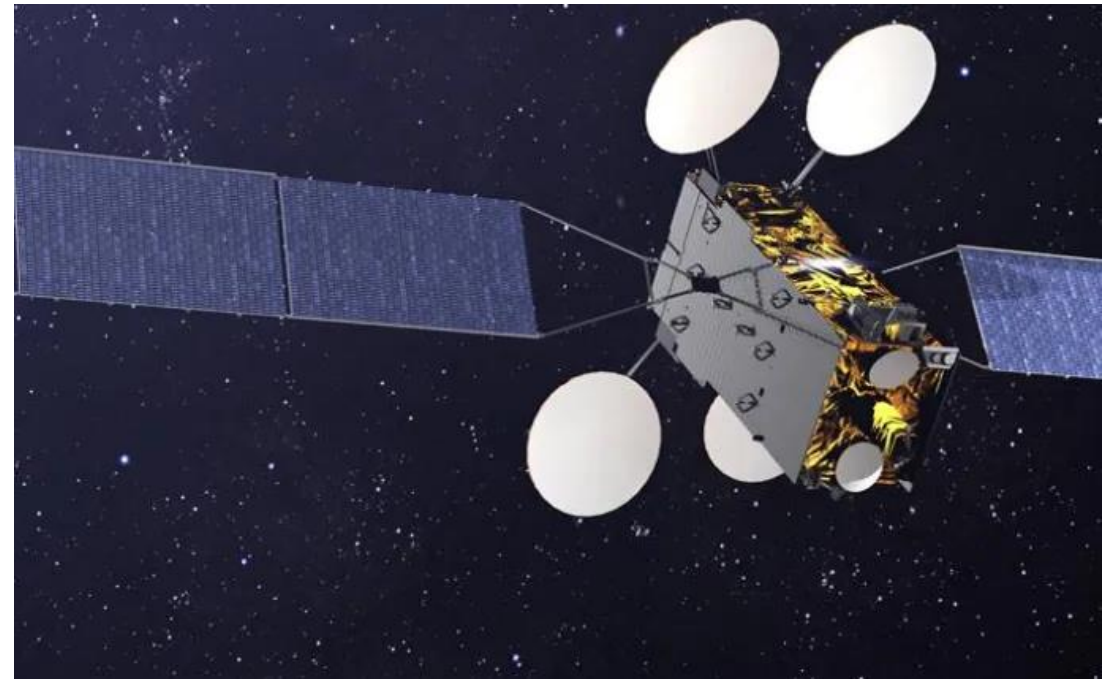
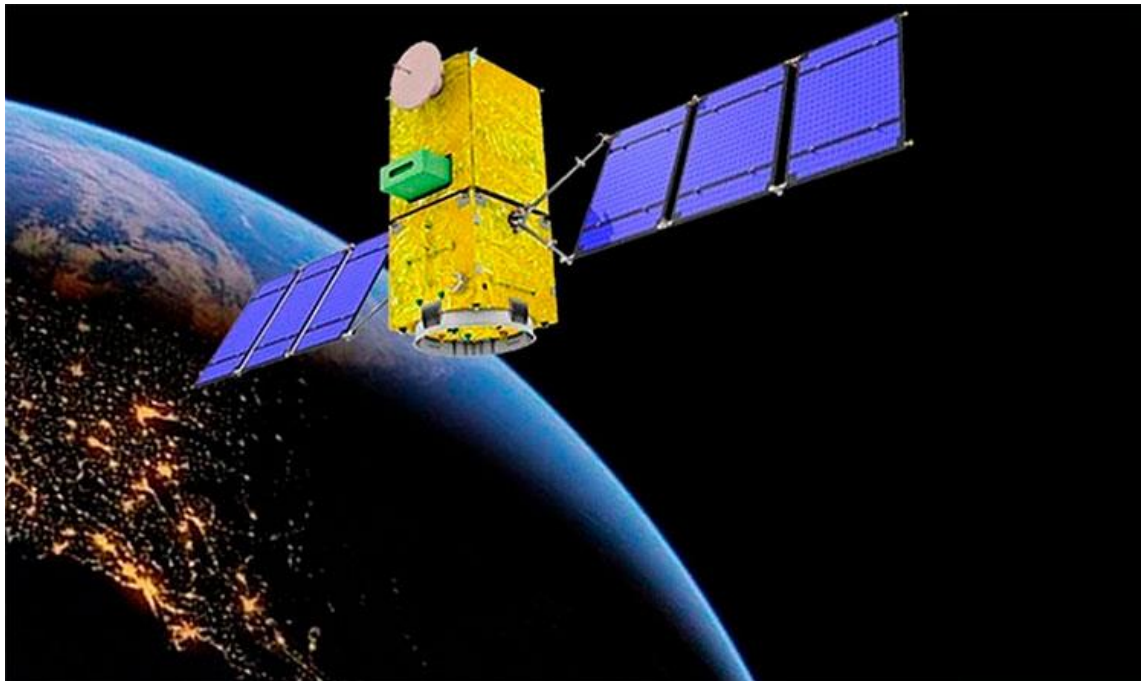


# THE PROBLEM



Source: ESA's Space Debris Office (2024)

# CONCERNS




- 1) environmental impacts in outer space caused by small, low-complexity satellites;
- 2) international regulations that aim at mitigating space pollution and at the sustainability of space activities;
- 3) classification of small low-complexity satellites from the perspective of Risk Theory;
- 4) specific regulations for small, low-complexity satellites;
- 5) real and hypothetical cases to illustrate the applicability of proposals;
- 6) less complexity and less reliability even in a high reliable system.

- 1) International Guidelines based on the Principle of Sustainable Development and Intergenerational Responsibility;
- 2) National Regulatory Proposal based on the “Good Neighbor” Principle and Due Diligence;
- 3) Classification of PSBCs by Risk/Criticality Levels of their Environmental Impacts in Outer Space based on the Principle of Precaution and Prevention;
- 4) Creation of a database of PSBCs based on Principle of Information and Participation.
- 5) Sharing of best practices.

# 2024 Latin American CubeSat Workshop

 October 22-24, 2024

 Salvador, Bahia, Brazil



 SCAN ME

LACW is the main forum in Latin America for discussing scientific and technological advances in the Cubesats field. The event takes place every two years, and in 2024 it will be hosted by SENAI CIMATEC in Salvador, Bahia, Brazil. During the workshop, discussions will be held and scientific works will be presented in different areas of knowledge, with emphasis on systems engineering, attitude control systems, telecommunications, system reliability, embedded systems, and satellite constellations. The organization of the event is carried out by a technical and scientific team of researchers from different institutions, with the support of their institutions.

The Latin American CubeSat Workshop is a great opportunity to present the New Space and its opportunities for the industry, bringing developers and researchers closer to the end users of the Cubesat technology.



## Keynote Speakers





## International Academy of Astronautics Latin American Conference on Small Satellite Technologies and Applications

November 4<sup>th</sup> to 9<sup>th</sup>  
Usina Cultural  
Salta, Argentina.

Secretaría de  
Ciencia y Tecnología

Early bird registration  
until September 15<sup>th</sup>

The Conference follows a history of IAA events in Latin America, which started with the 1<sup>st</sup> Cubesat Workshop in Brasilia in 2014, and the 1<sup>st</sup> Small Satellites Symposium in Buenos Aires in 2017.



Thank you!

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