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**Título da Palestra:** “Opportunities from the X-ray Astronomy”

**Palestrante Convidado da Sessão Astronomia e Astrofísica:**

**Resumo:** X-ray Astronomy deals with many of the most extreme physical conditions in the Universe including very low or high densities, unusually hot plasma, and strong magnetic fields. In fact, being produced by more than half of the baryons in the Universe, X-rays are associated with almost all kind of astrophysical systems such as hot gas permeating galaxy clusters and galaxies, active galactic nuclei, stars and their remnants, and bodies in planetary systems as planets, moons and comets. The atmosphere is opaque to X-rays so X-ray Astronomy is only carried out from above atmosphere by lifting scientific payloads aboard rockets, balloons, and satellites. Thus, as a branch of the space exploration that makes it possible only in the past 60 years, X-ray Astronomy is a recent field when compared to the modern optical Astronomy which was born with the first telescopes in the early 1600s. In spite of this, its rapid growth and remarkable contributions have opened new horizons in science. While involving state-of-the-art technology and demanding substantial funding to support it, X-ray Astronomy is marked by open access with every researcher being able to ask for observations in the vast majority of X-ray satellites and also explore their public rich, archival observations. This is important not only to maximize the results of the missions but, in another perspective, also to promote the development of research in developing countries. In this talk, I will contextualize the reasoning above and present some examples and paths that can be followed to explore X-ray Astronomy and its potential to contribute to the Brazilian Astronomy at low cost.

