UNIVERSITÀ DEGLI STUDI DI MODENA E REGGIO EMILIA

DIPARTIMENTO DI SCIENZE FISICHE, INFORMATICHE E MATEMATICHE

RESEARCH SEMINARS / MODENA

ASTRO SEMINAR

Exploring the physics of the Universe



Feeding supermassive black holes

An X-ray view of active galactic nuclei

THE SPEAKER

Dr. Alessandro Peca

Universidad Diego Portales
Santiago, Chile

WHEN

Wednesday, 21 October 2026

14:00

WHERE

Room L1.3 ·Department FIM, Modena

REMOTE LINK

ABOUT THE TALK

Active galactic nuclei (AGN) are powered by accretion onto supermassive black holes (SMBH) and are among the most luminous persistent sources in the Universe. Despite decades of study, however, a fundamental question remains open: how is gas transported from the host galaxy down to the immediate vicinity of the black hole?
X-ray observations provide a unique view of this environment, probing the innermost regions of AGN and revealing the physical state, geometry, and dynamics of highly ionized gas. In this talk, I will introduce the basic X-ray properties of AGN and discuss how X-ray spectroscopy can be used to trace obscuration, accretion flows, and powerful winds close to the central engine.
I will then focus on the feeding side of the problem and present recent evidence for a highly ionized, relativistic inflow observed in the X-ray spectrum of an AGN. I will discuss its possible location, physical interpretation, and implications for the way matter may be supplied to SMBH.

AstroSeminar

blackholeweather.unimore.it
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