



IUSS

Scuola Universitaria Superiore Pavia

University School for Advanced Studies

The University School for Advanced Studies IUSS Pavia is an Italian Public Institution devoted to research and higher education. Since 1997, IUSS fulfills an advanced teaching and research model in the field of different important disciplines.

One of the research activities of the Science, Technology and Society Department is the study of some of the most extreme objects and phenomena in the Universe.

The IUSS astrophysics group investigates sources of high-energy emission from the sky, which range from flares of stars like our Sun to regular pulses produced by different species of dead stars (white dwarfs, neutron stars and black holes), from catastrophic explosions in distant galaxies (supernovae, gamma-ray bursts and mergers of compact objects, now detectable also through their powerful emission of gravitational waves) to the interstellar gas and dust in which the radiation propagates.

This research is heavily based on observations performed with the most advanced space observatories (predominantly in the X-ray and gamma-ray band) and ground-based optical and radio telescopes. To tackle the challenging size of the astrophysical data and archives, the group develops new algorithms and data-mining strategies. The IUSS astrophysicists also participate in the development of new missions and instruments.

All these activities are carried through in collaboration with a large number of colleagues working in Italian and international universities and research institutes.



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IUSS is located in the prestigious "Palazzo del Broletto", a XII century building in Piazza della Vittoria, right in the main square downtown Pavia.

Palazzo Broletto
Piazza della Vittoria, 15
27100 Pavia – Italy

Phone +39 0382 375867
international.relations@iusspavia.it
www.iusspavia.it

