

**BLACK HOLES IN DENSE STAR CLUSTERS**  
**Aspen Center for Physics**  
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TITLE: Black Holes in Nuclear Star Clusters

SPEAKER: Nadine Neumayer (MPIA)

HST surveys have shown that nuclear star clusters are nearly ubiquitous in the centers of nearby galaxies with masses similar to or lower than the Milky Way. Like in the Milky Way they often coincide with black holes at the centers of galaxies. Unlike black holes, NCs provide a visible record of the accretion of stars and gas into the nucleus. I will present our ongoing programme to obtain high spatial resolution kinematic observations of the nearest nuclear star clusters using adaptive optics-assisted integral-field spectroscopy. These observations provide important information on the formation mechanism of nuclear star clusters, and allow us to estimate nuclear star cluster and potential black hole masses and examine scaling relations with their host galaxies.