**Abstract**

One of the most fundamental predictions of general relativity are black holes. Their defining feature is the event horizon, the surface that even light cannot escape. So far, we have never seen the event horizon, but this is about to change. Advanced computer simulations make clear predictions of how the shadow of black holes should look like and global interferometric radio observations with the Event Horizon Telescope are now trying to image the supermassive black hole in the center of our own Milky Way and the radio galaxy M87 for the very first time. To improve the imaging quality further more telescopes should be added to the array, in particular in Africa. The more distant future will belong to higher frequencies and space-based interferometry. The talk will give an overview of the ongoing research to image and simulate black holes, as well as of plans for future expansions.