

## Dark Matter Overview

*Friday 6 May 2022 14:00 (1 hour)*

Over the past several decades physicists have made remarkable progress in understanding the fundamental building blocks of nature. Yet there remains much we still do not know. One of the biggest open questions in our Universe is the nature of dark matter. Cosmological and astrophysical observations point to the existence of a non-luminous and mysterious form of matter that is far more abundant than all the visible matter in our Universe. This substance, which we simply refer to as “dark matter”, holds our Universe together. It is responsible for the formation of galaxies, the solar system and ultimately life as we know it.

In this one hour lecture, I will discuss how particle and astro-physicists have been trying to answer two questions, What is dark matter? and How do we find it? The lecture will focus on the current status of dark matter searches. In particular, how connections between diverse searches from the laboratory to the cosmos could help deepen our understanding of dark matter.

**Presenter:** MOHLABENG, Gopolang (Queen’s University)