



Professor Ruksana Osman, Senior Deputy Vice-Chancellor: Academic

**CORDIALLY INVITES YOU TO THE INAUGURAL LECTURE OF  
PROFESSOR MATT HILTON, SCHOOL OF PHYSICS, FACULTY OF SCIENCE**

**Galaxy Clusters Across the Universe**

Clusters of galaxies are the most massive gravitationally bound structures in the universe. A typical cluster is approximately 100 trillion times more massive than our Sun, and made up of hundreds of galaxies embedded in an atmosphere of hot (10 million K) gas. They are hostile environments that shut down star formation, leaving clusters in the local universe full of 'red and dead' elliptical galaxies. Collisions between galaxy clusters are the most energetic events that have happened in the universe, after the Big Bang. In this talk I will describe the hunt for galaxy clusters across 10 billion years of cosmic history, what we can learn about their formation and evolution from observations across the electromagnetic spectrum, and how this may help us to understand the properties of the mysterious dark matter and dark energy that make up most of the universe.

Date: **Monday, 31 July 2023** | Time: **17:00**

Venue: **Senate Room, 2nd Floor, Solomon Mahlangu House, Braamfontein Campus East, Wits University**

**Register here for in-person attendance:**

[shorturl.at/jDJR6](https://shorturl.at/jDJR6)

**This lecture will also be streamed live on the Wits YouTube channel.**

*Join the live stream here:*

[shorturl.at/rvGNQ](https://shorturl.at/rvGNQ)

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