

PUBLIC TALK

THE THREE-BODY PROBLEM & THE FORMATION OF THE SOLAR SYSTEM

One of the great unsolved problems in mathematics and physics is the three-body problem: finding an exact analytical solution for the motion of three bodies interacting through gravity.

To date, researchers have developed increasingly sophisticated computational methods to model and predict the complex behaviour of three-body systems. However, the problem remains one of the most challenging in classical mechanics.

The three-body problem also plays an important role in understanding many phenomena in our Solar System, including theories of planetary formation through accretion, where both advanced mathematical models and powerful computational techniques are essential.

This talk will provide an introduction to the three-body problem, its significance in mathematics, physics and astronomy, and the computational approaches used to study it. A selection of colourful visualisations will illustrate the fascinating dynamics of these systems.

Prof Martin Weigt is an Associate Professor in the Department of Mathematics at Nelson Mandela University. He holds a C2 rating from the National Research Foundation (NRF).



PROF MARTIN WEIGT
Nelson Mandela University

TUESDAY
28 July 2026



TIME
16H00-17H00



VENUES
Inkanyezi Building 127_0_002
Nelson Mandela University
South Campus, Summerstrand
& Online



GOT A QUESTION?

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