

# SCIENCE in STEWARTON

THURSDAY 23<sup>RD</sup> FEBRUARY

6.30pm to 8.00pm

STEWARTON ACADEMY

Cairnduff Place, Stewarton, KA3 5QF

**1+1+1>3:**

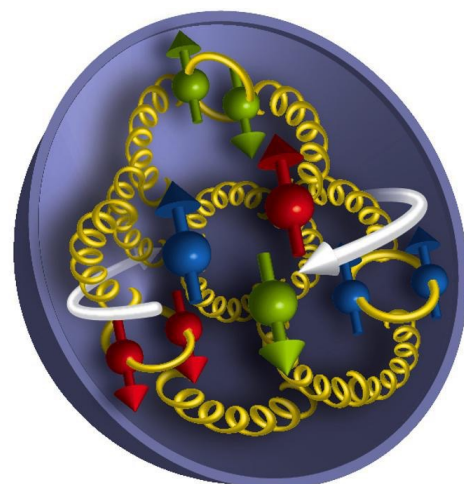
**When it comes to quarks, the whole is more than the sum of its parts**

**Dr Bjoern Seitz**

Dr David Mahon, Rick Gray, Francis Thomson, Nia Hunter  
Nuclear and Hadron Physics Group, University of Glasgow

Visible matter in the known universe is made from atoms. At the core of each atom is the nucleus made from protons and neutrons, which themselves are composite particles made from point like quarks, considered to be fundamental. Understanding the properties of protons and neutrons based on quarks as the most basic constituents of matter is key to our understanding of how the universe is build. As it turns out, we do not understand how even simple properties like mass and size of the proton derive from the smallest elements.

The presentation will explore this conundrum and the instrumentation required for its research. Hands-on demonstration of typical detectors will accompany the lecture.



How will it work?

- Session is free and open to everyone.
- Starts with refreshments from 6.30pm to 7pm.
- Then we settle in to café style seating to explore our universe with a short talk by our speaker, followed by an open informal discussion.

Next event

- Thursday 30<sup>th</sup> March