

# Neutrinoless double- $\beta$ decay and the challenge it poses for nuclear physics

*Friday 10 May 2024 16:20 (30 minutes)*

In this talk, I will demonstrate the impact from nuclear structural aspects on the  $0\nu\beta\beta$  matrix element calculations. Especially, I will outline recent works on neutrinoless double-beta ( $0\nu\beta\beta$ ) decay nuclear matrix elements by using the Hamiltonian-based generator coordinate method, which enables the treatment of collective and non-collective correlations on the same footing. In addition, I will discuss some strengths and weaknesses and give a prospectus for future improvements.

## Collaboration (if any)

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