



Contribution ID: 103

Type: **Invited oral presentation**

## Probing shape coexistence in neutron-rich nuclei with transfer reactions

*Tuesday, 21 April 2026 09:20 (20 minutes)*

Transfer reactions provide a powerful and selective tool to probe the microscopic structure of atomic nuclei. In particular, they are sensitive to single-particle occupancies and wave-function overlaps, offering direct insight into the interplay between single-particle and collective degrees of freedom. This makes them ideally suited to investigate shape coexistence in nuclei.

In this talk, I will give a brief introduction to transfer reactions and discuss recent measurements using radioactive ion beams. Special emphasis will be placed on two-neutron transfer reactions, which are particularly sensitive to shape coexistence and configuration mixing. I will outline future prospects for transfer-reaction studies at next-generation facilities, with a focus on the ARIEL project at TRIUMF. The increased beam intensities and extended isotope reach will open new opportunities for systematic investigations of shape coexistence in neutron-rich nuclei.

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**Session Classification:** Gamma-ray Spectroscopy enabled by ARIEL re-accelerated rare isotope beams