

# Mixed-spin pairing in deformed heavy nuclei

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Traditional pairing in nuclear systems is of the identical-particle kind (i.e., neutron-neutron or proton-proton). This is counter-intuitive, given that the neutron-proton interaction is stronger. In earlier work, we had hypothesized that such neutron-proton pairing may appear in heavy nuclei. Such studies had assumed spherical symmetry, which is known to be an inappropriate assumption in this region of the nuclear chart. In recent work we extended our formalism and carried out mean-field pairing studies in the presence of deformation. We found that neutron-proton pairing survives and should be experimentally accessible. Time permitting, I may also discuss related work using ab initio many-body techniques.

**Author:** GEZERLIS, Alex (University of Guelph)

**Presenter:** GEZERLIS, Alex (University of Guelph)

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