

PHYSICS COLLOQUIUM

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THE NUCLEONS GO TWO BY TWO: CORRELATIONS IN NUCLEI

OCTOBER 8 | 2:30 PM

130 HAHN HALL NORTH

ZOOM LINK: [HTTPS://VIRINIATECH.ZOOM.US/J/96084996911](https://viriniatech.zoom.us/j/96084996911)

Just like people, nucleons have different behaviors individually and when paired up. The typical individual nucleon (proton or neutron) orbits the nucleus in the mean-field potential of the other $A-1$ nucleons. However, when two nucleons get too close, the very strong short-range nuclear interaction can form them into close-proximity strongly-correlated pairs. By studying these pairs, we can learn about the short-range part of the nuclear force, cold dense nuclear systems, and how the quark-gluon structure of nucleons is modified in nuclei.