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Abstract for an Invited Paper  
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**Nuclear femtography as a bridge from protons and neutrons to the core of neutron stars<sup>1</sup>**

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In this talk I will address how the science of Nuclear Femtography, probed by deeply virtual exclusive electron nucleon scattering, has revolutionized our approach to exploring the internal structure of the nucleon. Current and planned experiments at the future EIC could in principle allow us to use all the information from data and phenomenology, on one side, to form tomographic images of the nucleon's quark and gluon distributions and, on the other, to reveal the nucleon's internal structure by measuring mechanical properties such as the quark angular momentum, energy density and pressure distributions. While this information is critical for ultimately understanding the working of the color forces, it also defines a new area of research where the fundamental gravitational properties of protons, neutrons and nuclei can be tested through recent astronomical observations constraining the neutron stars equation of state.

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