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Abstract for an Invited Paper
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”Wherever they may lead”: Effective field theories in nuclear physics¹

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Effective field theory (EFT) provides a paradigm to describe nature through the controlled expansion of observables in a small ratio of distance scales. I will relate our progress in deploying EFTs to make sense of striking features in the emergence of nuclear structure from the Standard Model of particle physics: pseudo-Goldstone bosons (pions) provide the long-range components of the interaction among nucleons, which are singular; few-nucleon systems are close to the unitarity limit where discrete scale invariance holds; nuclei heavier than the alpha particle often have cluster substructures; nuclear matter saturates at finite binding energy per nucleon and density; and nuclei offer a unique arena to test fundamental symmetries.

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