

Abstract Submitted
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Machine learning methods for extracting structure functions from experimental data¹ ANDREW HOYLE, MICHELLE KUCHERA, Davidson College, PAWEL AMBROZEWICZ, Jefferson Lab, OGUZHAN ÇÖLKESEN, Davidson College, ASTRID HILLER-BLIN, Jefferson Lab, YAOHANG LI, Old Dominion University, WALLY MELNITCHOUK, Jefferson Lab, ZACH NUSSBAUM, RAGHU RAMANUJAN, Davidson College, NOBUO SATO, Jefferson Lab — Machine learning methods are used to extract structure functions from experimental deep-inelastic scattering cross section data with uncertainty predictions, without the need for explicit parameterizations for the structure functions. Structure functions are predicted without direct supervision, with learning models trained using explicit supervision on cross sections directly. Results from generative adversarial networks and deep regression models will be presented, and predictions with uncertainties from different methods compared.

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