Contribution ID: **58** Type: **not specified**

Pixelizing Quantum-Correlation Functions: A Novel Approach for Hadron Structure Studies

Friday 22 November 2024 09:40 (20 minutes)

In this talk, we introduce a new approach for parameterizing Quantum-Correlation Functions (QCFs). By treating QCFs as multidimensional images or tensors, we propose a pixel-based representation. This novel perspective offers a versatile framework for analyzing and manipulating QCFs, enabling us to leverage a wide range of image processing techniques.

We will demonstrate the effectiveness of our new approach by applying it to extract Generalized Parton Distributios from Compton Form Factors. We will present initial results, showcasing its potential to enhance our understanding of hadron structure. Additionally, we will discuss the benefits of this method, such as its flexibility, and computational efficiency. By treating QCFs as images, we unlock new possibilities for research and analysis in hadron physics.

Would you be interested in giving a 5-minutes flash talk?

Yes

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Session Classification: Public Session