## Phenomenology 2025 Symposium



Contribution ID: 12

Type: not specified

## Field-Theory Action for the Constructive Standard Model

Monday 19 May 2025 14:15 (15 minutes)

We introduce a field-theory framework in which fields transform under the little group, rather than the Lorentz group, specific to each particle type. By utilizing these fields, along with spinor products and the x factor, we construct a field-theory action that naturally reproduces the vertices of the constructive standard model (CSM). This approach eliminates unphysical components, significantly reduces the degrees of freedom compared to traditional field theory, and offers deeper insights into the power of constructive amplitudes. Our action is momentum-conserving, Lorentz-invariant, Hermitian, and nonlocal. We also discuss this as a framework for developing new constructive field theories, discussing their essential properties and potential applicability in renormalization theory and nonperturbative calculations.

## Mini Symposia (Invited Talks Only)

Plenary (Invited talks only)

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