

Positive Geometry in Particle Physics and Cosmology

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In recent years, novel geometric structures were found both in particle physics and cosmology. This applies to scattering amplitudes, which describe elementary particle collisions, and cosmological correlators, which are relevant for early universe cosmology. So far, the new structures have appeared in various toy models. Within the ERC-funded UNIVERSE+ collaboration, we take these observations as hints for an underlying mathematical framework, which we aim at developing, with the goal of describing the real world. In this colloquium talk I will give an overview of these recent developments.