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Abstract for an Invited Paper
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Henry Primakoff Award for Early-Career Particle Physics (2021): Geometric Picture for Scattering Amplitudes¹

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I will review some surprising connections between scattering amplitudes in quantum field theory, used to predict the outcomes of particle experiments, and the positive geometry. The most prominent example concerns gluon scattering amplitudes in maximally supersymmetric extension of quantum chromodynamics, which can be calculated as volume of the Amplituhedron. I will show some of the recent developments and open challenges and I will further speculate where this research can possibly lead us in the new understanding of fundamental physical laws.

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