

Contribution Title: SURPRISING SYMMETRIES OF SCATTERING AM-
PLITUDES IN GAUGE THEORIES
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Invited speaker: Topical session
YRS seminar: NO

I will review a recent progress in computing scattering amplitudes in strongly coupled gauge theories - a fascinating subject which has been recently boosted by the formulation of the gauge/string duality in maximally supersymmetric Yang-Mills theory which is considered nowadays as “the simplest gauge theory” and/or harmonic oscillator of 21st century. In addition to the conventional symmetry of the underlying Lagrangian, the scattering amplitudes in this theory exhibit a new, dual superconformal symmetry. This symmetry is powerful enough to completely determine the scattering amplitudes for arbitrary coupling in a suitably defined limit.