SEMPARIS – Séminaires en région parisienne

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Particle Physics in Paris

Mardi 10 Novembre 2020, 18 :00
IHP, Seminar via zoom https ://ijclab.zoom.us/j/94900481972
Domaines : astro-ph—hep-ph—hep-th

Titre : *From Scattering Amplitudes to Gravitational Waves*

Orateur : **Zvi Bern (UCLA)**

Résumé : *The remarkable detection of gravitational waves by the LIGO/Virgo collaboration has opened a new window into the cosmos. In this colloquium we explain how particle theorists can help out with state-of-the-art calculations directly relevant for gravitational-wave emission from compact astrophysical objects. The past decade has seen enormous advances in our ability to compute quantum scattering amplitudes making seemingly impossible calculations tractable. These advances include ideas such as the duality between color and kinematics, double- copy relations and generalized unitarity. After introducing these concepts we explain how these ideas can be transferred to the binary black hole inspiral problem.*