Francisco Correa (Universidad Austral de Chile, Chile)

Title: Moduli spaces in field theories with $\mathcal{PT}$-regularized solitons

Abstract: In this talk, we will discuss the moduli space for a classical field theory that possesses complex stable multi-soliton solutions with real energies when $\mathcal{PT}$-regularized. A one-dimensional moduli space captures well the main feature of the centre of mass motion of the one and two-soliton solutions. We demonstrate that even the time-delay and spatial displacements occurring for the one-soliton constituents in a multi-soliton scattering process can be extracted from a moduli space analysis.

Reference: F. Correa, A. Fring and T. Taira, Moduli spaces for $\mathcal{PT}$-regularized solitons, Journal of High Energy Physics **2022** 109 (2022).