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Seminar: Time-dependent solutions of Biadjoint Scalar Field Theories

Tuesday 1 July 2025 15:45 (45 minutes)

Biadjoint scalar field theories appear in the study of scattering amplitudes and classical solutions in gauge, gravity and related theories. In this talk, we present new exact solutions of biadjoint scalar field theory, showing that time-dependent solutions are possible and analytically tractable. We generalise the theory to include mass and / or quartic terms, and also a coupling to a constant current. This allows for more exact solutions, which make contact with previous soliton literature. We also find bounded solutions, in contrast to all known previous examples. Our results may be useful for the study of non-perturbative aspects of the double copy b

Presenter: ARMSTRONG-WILLIAMS, Kymani