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Simona Rota Nodari: The Dirac-Klein-Gordon system in the strong coupling limit.

jeudi 7 juillet 2022 09:00 (1 heure)

In this talk, I will present a recent result on the behaviour of the solutions of a Dirac-Klein-Gordon system in the limit of strong coupling and large masses of the Klein-Gordon fields. I will prove convergence of the solutions to the system to those of a cubic non-linear Dirac equation. This shows that in this parameter regime, which is relevant to the relativistic mean-field theory of nuclei, the retarded interaction is well approximated by an instantaneous, local self-interaction.

This is a joint work with J. Lampart, L. Le Treust and J. Sabin.