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**Bound State Solution of the Klein- Gordon Equation for Different Vector and Scalar Potentials**

له‌ زنجيره‌ى چاڵاكيه‌كانى به‌شى فيزيك/كۆلێژى په‌روه‌رده‌ى زانكۆى سه‌لاحه‌ددين له‌ پێشكه‌شكردنى سيمينار و له‌ رۆژى سێ شه‌ممه‌ به‌روارى 06/04/2021 و له‌ كاژێر 8:30 ى ئيوراه‌ و به‌ به‌كارهێنانى سايتى (meet.google.com) سيمينارێك پێشكه‌شكرا له‌لايه‌ن بەڕێز (م. پەیمان خالید ، زانكۆی سۆران) و به‌و ناونيشانه‌ى كه‌ له‌ سه‌ره‌وه‌ ئاماژه‌ى پێكراوه‌. بابه‌ته‌كه‌ بريتي بوو له‌:

In this seminar, the speaker investigates the exact bound state solution of the Klein-Gordon equation for an energy-dependent Coulomb-like vector plus scalar potential energies. To the best of our knowledge, this problem is examined in literature with a constant and position dependent mass functions. As a novelty, we assume a mass-function that depends on energy and position and revisit the problem with the following cases: First, we examine the case where the mixed vector and scalar potential energy possess equal magnitude and equal sign as well as an opposite sign. Then, we study pure scalar and pure vector cases. In each case, we derive an analytic expression of the energy spectrum by employing the asymptotic iteration method. We obtain a non-trivial relation among the tuning parameters which lead the examined problem to a constant mass one. Finally, we calculate the energy spectrum by the Secant method and show that the corresponding unnormalized wave functions satisfy the boundary conditions. We conclude the manuscript with a comparison of the calculated energy spectra versus tuning parameters.

زياتر له‌ 86 ئاماده‌بووان كه‌ له‌ ژماره‌يه‌ك زانكۆيه‌كانى كوردستان (سه‌لاحه‌دين, سۆران, سلێمان و كۆيه‌) به‌شداريان كرد و زۆر سووديان له‌ سيميناره‌كه‌ بينى و ده‌ستخۆشى گه‌رم له‌ پێشكه‌شكارى به‌رێز كرا.





