

# Instantaneous Bethe–Salpeter look at the lightest pseudoscalar mesons

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The consistent simultaneous interpretation of pions and kaons both as bound states of quark and antiquark and as the (almost) massless boson states related, according to Goldstone's theorem, to the dynamical (and explicit) breakdown of the chiral symmetries of QCD still represents a major challenge. Applying inversion to sufficiently simplified versions of the homogeneous Bethe–Salpeter equation, governing bound states in quantum field theory, enables us to get straightforwardly a qualitative idea of how the underlying effective interactions might look like in this case.

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