UNIVERSITY OF MIAMI
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Interplay of Solitons and Instantons (tentative)

Abstract

In certain problems particle-like topological solitons have degenerate masses while their inner structure is different. At weak coupling the soliton masses are much larger compared to that of elementary excitations, and they can be treated in the quasi–classical approximation. The mass degeneracy persists in perturbation theory. The question is whether the mass degeneracy is lifted non–perturbatively. We identify a non-conventional class of instantons which lifts the degeneracy through tunneling.