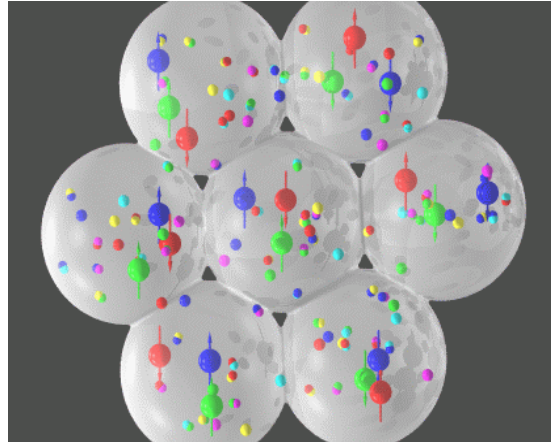




NEW YORK CITY COLLEGE OF TECHNOLOGY
Joint Mathematics and Physics Colloquium

Understanding quark confinement: an ascent from lower dimensions



Presented by:

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Abstract

Quantum Chromodynamics (QCD), the theory describing strong interactions, has been extensively studied and its perturbative aspects are well understood and in agreement with high-energy experiments. However, quantitative understanding of key features such as confinement and mass gap has long remained elusive. I shall review our analysis of these in a simpler, yet nontrivial context, the (2+1)-dimensional Yang-Mills theory. Physically relevant parameters such as the string tension are obtained and found to be in excellent agreement with numerical simulations.