

Abstract

The Einstein's Fields Equation coupled with an Abelian gauge field and a Higgs field possesses a special type of solution, mathematically known as Einstein-Bogomol'nyi equation and physically known as Cosmic Strings. In this talk, I will present some existence theorems for such equation and also its close companion Gravitating Vortex equations, introduced from a moment map picture. This is based on the joint work with Garcia-Fernandez and Pingali.