

Almost all of inflationary models are scalar driven. However, gauge fields and other non-scalar fields are far more common at all energy scales, in particular at high energies seemingly relevant to inflation models. Hence, in this talk I will consider the role and consequences that gauge fields can have during inflationary era. Gauge fields may be turned on in the background during inflation, or may become relevant at the level of cosmic perturbations. There have been two main class of models with gauge fields in the background, models which show violation of cosmic no-hair theorem and those which lead to isotropic FLRW cosmology, respecting the cosmic no-hair theorem. All of these models has their specific observational features on the CMB and/or the primordial cosmic magnetic fields.