We will describe results related to the notion of "intermittency", i.e. the property that a random field develops large values ("high peaks") when time gets large. We will remind how this phenomenon appears in the context of SPDEs. In particular, we will illustrate how the intermittent behavior of the solution to an SPDE depends on the type of driving noise in the cases of nonlinear stochastic heat and wave equations driven by fractional noise. In the latter case, the results are obtained via a Feynman-Kac representation similar to the one introduced by Dalang, Mueller and Tribe (2008). (Received January 20, 2015)