

**Vadim Kaimanovich : Stationarity and stationarizing.**

In the absence of an invariant probability measure a natural replacement is a measure invariant with respect to a single operator related to the structure of the state space. Such constructions are, for instance, known for group actions (Furstenberg's  $\mu$ -stationary measures) and for foliations (Garnett's harmonic measures). Quasi-regular representations with respect to stationary measures play an important role in the representation theory. The opposite problem is to describe all probability measures  $\mu$  on the group which make a given measure on the action space  $\mu$ -stationary (or, at least, to find some of them). We shall describe a procedure which allows one to obtain a lot of measures which have the same Poisson boundary (and in particular, stationarize the same harmonic measure on the Poisson boundary), and show that in certain situations which procedure is exhaustive.