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Mickaël David Chekroun* (chekro@lmd.ens.fr), 24 Rue Lhomond, 75005 Paris, France. *Local Bifurcations in Random Dynamical Systems*. Preliminary report.

It is well-known that bifurcation theory is far from being complete in the framework of random dynamical systems, as introduced by Ludwig Arnold and his Bremen group, even in finite dimension. In this talk we will introduce the main issues and present results of local bifurcations that can be however obtained for some random partial differential equations. Our approach is based on a center manifold theorem in a random context and some abstract results of classical bifurcation theory that can be adapted within our framework. Applications to concrete examples will support the theoretical developments. This talk is based on a joint work with Michael Ghil (ENS & UCLA) and Shouhong Wang (Indiana University). (Received March 03, 2009)