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Xiaolong He* (xhe92@math.gatech.edu), 686 Cherry St, Atlanta, GA 30332, and **Rafael de la Llave** (rll6@math.gatech.edu), 686 Cherry st, Atlanta, GA 30332. *Construction of quasi-periodic solutions to state-dependent delay differential equations.*

The existence of quasi-periodic solutions for state-dependent delay differential equations is investigated by using the parameterization method, which is different from the usual way-working on the solution manifold. Under the assumption of finite-times differentiability of functions and exponential dichotomy, the existence and smoothness of quasi-periodic solutions are investigated by using contraction arguments. Meanwhile, we show that there are Lindstedt series under some nondegeneracy conditions for the analytic case. In particular, a KAM theory is developed to seek analytic quasi-periodic solutions, which gets involving the theory of foliation-preserving torus mapping. Moreover, we prove that the set of parameters which guarantee the existence of analytic quasi-periodic solutions is of full measure. All of these results are given in an a-posterior form. Namely, given a approximate solution satisfying some non-degeneracy conditions, there is a true solution nearby. (Received August 24, 2015)