On an analytic family of representations of mapping class groups

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We will first recall the notion of family of representations of a discrete group depending analytically on a parameter and a general approach to the construction of such families due to A. Vallette. We will then apply this construction to the case of mapping class groups of punctured surfaces by using some objects (the $6j$-symbols of $U_q(s_2)$) coming from quantum topology. The family of representations that we obtain has many interesting properties and in particular the path of representations corresponding to the real values of the parameter interpolate between two remarkable unitary representations of mapping class group well known to geometers. (Joint with Bruno Martelli)