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Genericity, analyticity, and global bifurcation of periodic solutions of delay equations

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We study the global bifurcation of periodic solutions for a class of delay-differential equations of Mackey-Glass type. In particular, the presence of a period-doubling cascade of periodic solutions is established. The proof relies on generic properties (in the sense of Kupka-Smale) for classes of such equations. We also discuss some open questions related to generic properties and analyticity of the solution branches.