

Title: Periodic paths on nonautonomous graphs

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Abstract: We define nonautonomous graphs as a class of dynamic graphs in discrete time whose time-dependence consists in connecting or disconnecting edges. We study periodic paths in these graphs, and the associated zeta functions. Based on the analytic properties of these zeta functions we obtain explicit formulae for the number of n-periodic paths, as the sum of the nth powers of some specific algebraic numbers. (C) 2012 Elsevier Inc. All rights reserved.

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