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George Avalos* (gavalos@math.unl.edu), Department of Mathematics, University of Nebraska-Lincoln, Lincoln, NE 68588. *Minimal Norm Control Asymptotics and Numerical Approximations for the Null Controllability of Non-Standard Parabolic-Like PDE Dynamics.*

Semidiscrete finite difference approximation schemes are presented for the null controllability of structurally damped plate equations. The key feature here is that the null controllers being approximated exhibit the asymptotics of the associated minimal energy function. We focus here upon the “nonspectral case”; i.e., the fourth-order elastic component of the dynamics does not necessarily obey hinged boundary conditions. (Received September 14, 2010)