1128-34-174 **Paul Eloe*** (peloe1@udayton.edu), Department of Mathematics, 300 College Park, Dayton, OH 45469-2316. *Fixed Point Methods and Boundary Value Problems at Resonance.*

Boundary value problems for nonlinear differential equations are at resonance if there exist nontrivial solutions to the associated linear problem. The shift method is a simple method to construct an equivalent nonlinear problem that is not at resonance. This talk surveys some recent work, two of which perform a shift that generates a Green's function that is positive on the interior of the domain and one that performs a shift to generate a Green's function that is negative on the interior of the domain. Different types of fixed point theorems are applied according to the sign of the Green's function. (Received February 24, 2017)