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**Abdulmalik Al Twaty** and **Paul Eloe\*** ([paul.eloe@notes.udayton.edu](mailto:paul.eloe@notes.udayton.edu)). *The Role of Concavity in Applications of Functional Fixed Point Theorems to Higher Order Differential Equations.*

In this article we apply an extension of an Avery type functional fixed point theorem to a family of boundary value problems for higher order ordinary differential equations. The theorem employs concave and convex functionals defined on a cone in a Banach space. Concavity of differentiable functions plays a key role in the application to second order equations. It is shown that a concept of generalized concavity plays the same key role in the application to the higher order equation. (Received July 22, 2011)