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Bryce Holthouse* (bxh54360@cmsu2.cmsu.edu), Department of Math. and Computer Science, University of Central Missouri, Warrensburg, MO , and **Lianwen Wang** (lwang@cmsu.edu), Department of Math. and Computer Science, University of Central Missouri, Warrensburg, MO 64093. *Monotone Solutions of Nonlinear Differential Equations.*

We consider the monotone solutions of the second order nonlinear differential equations of the form $(P(t)f(x'(t)))' = Q(t)g(x(t))$, where $P(\cdot), Q(\cdot) \in C([0, \infty); \mathbb{R})$ and $f(\cdot), g(\cdot) \in C(\mathbb{R}; \mathbb{R})$. The classification of monotone solutions is discussed. Some boundedness properties of monotone solutions are obtained under natural assumptions. (Received September 26, 2006)