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**James Marcotte\*** ([jamesmarcotte@uri.edu](mailto:jamesmarcotte@uri.edu)), Department of Mathematics, University of Rhode Island, 5 Lippitt Road, Kingston, RI 02881. *Systems of Difference Equations in  $\mathbb{R}^n$  that are monotone in the order induced by a standard octant.* Preliminary report.

We establish a characterization for systems of difference equations in  $n$ -dimensional space that are monotone with respect to the order induced by a positive cone given by one standard octant. This result is applied to the study of global behavior of solutions to several systems in three-dimensional space. (Received February 20, 2018)