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Yevgeniy Kostrov and **Zachary Kudlak*** (zachary.kudlak@msmc.edu), Newburgh, NY 12550.

On the Boundedness Character of a System of Rational Difference Equations in the Plane with Nonnegative Periodic Coefficients. Preliminary report.

In this preliminary report, we investigate the global stability, periodic character, and the boundedness nature of the solutions of several special cases which are contained in the system of difference equations

$$x_{n+1} = \frac{\alpha_n}{\beta_n x_n + y_n}, \quad y_{n+1} = \frac{a_n + b_n x_n + c_n y_n}{A_n + B_n x_n + C_n y_n}, \quad n \geq 0,$$

where initial conditions x_0 are y_0 are nonnegative and not both zero, and where the coefficients are nonnegative and periodic such that the denominators are always positive. (Received September 21, 2012)