Phase as determined by Correlation is irrelevant for Resonance versus Attenuation in the Beverton-Holt model

YI YANG[1], ROBERT J. SACKER[2]

[1] *Department of Mathematics and Physics, Chongqing University of Science and Technology, Chongqing, 401331, China.*
E-mail address: yangyi-2001@163.com

[2] *Department of Mathematics, University of Southern California, Los Angeles, CA 90089-2532, USA.*
E-mail address: rsacker@usc.edu *URL:* http://www-bcf.usc.edu/~rsacker

An exact expression is derived relating the state average of the periodic solution x_j to the average of the environmental carrying capacities K_j for the periodic Beverton-Holt equation for arbitrary period. By studying numerically the period 3 case we show that the correlation coefficient of the intrinsic growth rates u_j and K_j is not relevant in determining attenuation or resonance. Instead a new criterion is presented.