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Dan M Maroncelli* (dmmaronc@ncsu.edu), 2108 SAS Hall, Box 8205, Raleigh, NC 27695, and **Jesus Rodriguez**. *On the solvability on nonlinear impulsive boundary value problems at resonance.*

The authors consider nonlinear impulsive boundary value problems of the form

$$x'(t) = A(t)x(t) + f(t, x(t)), \quad t \in [0, 1] \setminus \{t_1, t_2, \dots, t_k\} \quad (1)$$

$$x(t_i^+) - x(t_i^-) = J_i(x(t_i^-)), \quad i = 1, \dots, k \quad (2)$$

subject to

$$Bx(0) + Dx(1) = 0. \quad (3)$$

We focus on the case of resonance, in particular, the case in which dimension of the solution space to the associated linear homogeneous problems is greater than one. (Received September 25, 2012)