

CORRIGENDUM TO
“POSITIVE SOLUTIONS OF SUPERLINEAR AND
SUBLINEAR BOUNDARY VALUE PROBLEMS”
[KOREAN J. MATH. 25 (2017), 37–43]

JUAN A. GATICA AND YUN-HO KIM*

The authors have established an existence result for positive solutions to boundary value problems of the form

$$\begin{cases} x'' + f(t, x) = 0 \\ \alpha x(0) - \beta x'(0) = 0 \\ \gamma x(1) + \delta x'(1) = 0, \end{cases}$$

assuming that f is either superlinear or sublinear without requiring any monotonicity assumptions on f . Recently we realized that this result for problems of this type already had been investigated by L. Erbe [1]. He employed the fixed point index as the main tool to obtain the main results. However we establish the existence result by a simple application of a fixed point theorem in cones. In this regard, our approach is slightly different from that of the paper [1] even if we use the standard technique.

2010 Mathematics Subject Classification: 34B15, 34B18, 47H10.

Key words and phrases: Boundary Value Problem; Superlinear; Sublinear; Cone; Compact map; Fixed Point Theory.

* Corresponding author.

© The Kangwon-Kyungki Mathematical Society, 2018.

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/3.0/>) which permits unrestricted non-commercial use, distribution and reproduction in any medium, provided the original work is properly cited.

References

- [1] L. Erbe, *Eigenvalue criteria for existence of positive solutions to nonlinear boundary value problems*, Math. Comput. Modelling **32** (5-6) (2000), 529–539.

Juan A. Gatica

Department of Mathematics
University of Iowa
Iowa City, IA 52242, USA
E-mail: gatica@math.uiowa.edu

Yun-Ho Kim

Department of Mathematics Education
Sangmyung University
Seoul 110-743, Republic of Korea
E-mail: kyh1213@smu.ac.kr