

UNIVERSITY OF PUERTO RICO  
RIO PIEDRAS CAMPUS  
FACULTY OF NATURAL SCIENCES  
DEPARTMENT OF MATHEMATICS

**Title: Discontinuity of multiplication and left translations in  $\beta G$**

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**Abstract**

The operation of a discrete group  $G$  extends to the Stone-Ćech compactification  $\beta G$  of  $G$  so that for each  $a \in G$ , the left translation  $\beta G \ni x \mapsto ax \in \beta G$  is continuous, and for each  $q \in \beta G$ , the right translation  $\beta G \ni x \mapsto xq \in \beta G$  is continuous. We shall discuss the question whether there are  $p, q \in G^* = \beta G \setminus G$  such that the multiplication  $\beta G \times \beta G \ni (x, y) \mapsto xy \in \beta G$  is continuous at  $(p, q)$  or the left translation  $G^* \ni x \mapsto px \in G^*$  is continuous at  $q$ .

Tuesday, December 11, 2012  
10:00 - 11:00 am  
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