



Banach J. Math. Anal. 1 (2007), no. 2, 221–226

BANACH JOURNAL OF MATHEMATICAL ANALYSIS

ISSN: 1735-8787 (electronic)

<http://www.math-analysis.org>

D’ALEMBERT’S FUNCTIONAL EQUATION ON COMPACT GROUPS

LÁSZLÓ SZÉKELYHIDI¹

This paper is dedicated to Professor Themistocles M. Rassias.

Submitted by M. Abel

ABSTRACT. At the Fourty-forth International Symposium on Functional Equations in 2006, Louisville, Kentucky, USA, T.M.K. Davison presented a talk under the title "D’Alembert’s functional equation on compact groups" in which he offered a solution method for this equation on any compact group. In this paper we offer another approach based on some very recent results on spectral synthesis, which method seems to be useful in the case of other equations.

¹ INSTITUTE OF MATHEMATICS, UNIVERSITY OF DEBRECEN, DEBRECEN, HUNGARY.
E-mail address: szekely@math.klte.hu

Date: Received: 13 June 2007; Accepted: 9 October 2007.

2000 Mathematics Subject Classification. Primary 43A45; Secondary 39B82.

Key words and phrases. spectral synthesis, functional equation, compact group.