



Year: 2006

Vol.: 69

Fasc.: 1-2

Title: On the quadratic functional equation on groups

Author(s): Peter de Place Friis and Henrik Stetkær

We study the solutions $f : G \rightarrow H$ of the quadratic functional equation on G , where G and H are groups, H abelian. We show that any solution f is a function on the quotient group $[G, [G, G]]$. By help of this we find sufficient conditions on G for all solutions to satisfy Kannappan's condition. We use this to derive explicit formulas for the solutions on various groups like, e.g., the $(ax + b)$ -group and $GL(n, \mathbb{R})$.

Address:

Peter de Place Friis
Mathematics Department
Sullivan-Harrell 364
Box 150694
Jackson, MS 39210-0001
USA
E-mail: friis2003@yahoo.com

Address:

Henrik Stetkær
Department of Mathematical Sciences
University of Aarhus
Building 530, Ny Munkegade
DK-8000 Aarhus C
Denmark
E-mail: stetkaer@imf.au.dk