Title: Reconsidering a functional equation arising from number theory

Author(s): Bruce Ebanks

In a recent paper Chávez and Sahoo considered the functional equation

$$f(ux - vy, uy + v(x + y)) = f(x, y)f(u, v),$$

which arose in a number theoretical context. Unfortunately one of their results is incorrect. Here we reconsider the equation on various domains. We observe that it is in fact a multiplicative Cauchy equation in disguise. We also point out some remaining open problems.

Address:
Bruce Ebanks
Department of Mathematics
and Statistics
Mississippi State University
PO Drawer MA
Mississippi State, MS 39762
USA