journal of inequalities in pure and applied mathematics
issn: 1443-5756

Volume 6, Issue 2, Article 34

On a Convolution Conjecture of Bounded Functions

Authors: Krzysztof Piejko, Janusz Sokol, Jan Stankiewicz,

Keywords: Hadamard product, Convolution, Subordination, Bounded functions.

Date Received: 30/11/04

Date Accepted: 03/03/05

Subject Codes: Primary 30C45; Secondary 30C55.

Editors: Kazimierz Nikodem,

Abstract: We consider the convolution $P(A,B) \star P(C,D)$ of the classes of analytic functions subordinated to the homographies $\frac{1+Az}{1-Bz}$ and $\frac{1+Cz}{1-Dz}$ respectively, where A, B, C, D are some complex numbers. In 1988 J. Stankiewicz and Z. Stankiewicz [11] showed that for certain A, B, C, D there exist X, Y such that $P(A,B) \star P(C,D) \subset P(X,Y)$. In this paper we verify the conjecture that $P(X,Y) \subset (A,B) \star P(C,D)$ for some A, B, C, D, X, Y.