

13th International Workshop on Dynamical Systems and Applications (**IWDSA 2014**), TOBB Economy and Technology University, Ankara, Turkey, June 14, 2014.

An alternative approach for Dirichlet problem in a disc

Bahriye KARACA and A. Okay ÇELEBİ

Yeditepe University, Istanbul, Turkey

bahriye.karaca@yeditepe.edu.tr

Abstract

In this talk, I will present the Dirichlet boundary value problem defined for higher-order differential equation in \mathbb{C} by an alternative approach. In this method I will use the iteration of the Cauchy-Pompeiu representation formula as a solution of the Dirichlet boundary value problem for polyanalytic functions. After transforming the problem into singular integral equation, I will state that it has at least one solution.