Meeting: 1005, Newark, Delaware, SS 13A, Special Session on Integral and Operator Equations

1005-45-190 **M. Zuhair Nashed*** (znashed@mail.ucf.edu), Department of Mathematics, University of Central Florida, Orlando, FL 32816-1364. *Boundary Integral Equations for Conformal Mappings for Interior and Exterior Domains.*

We provide an overview of the use of various kernels (Szego, Bergman, Kerzman-Stein, and other reproducing kernels) in the derivation and formulation of various integral equation methods for computing a conformal map for interior and exterior domains, with emphasis on boundary integral equations. We summarize results by Murid, Razali and the author[J. Integral Equations,10(1998), 517 - 532; J. Comp.Appl. Math., 82 (1997), 333 - 350, and related extensions] and discuss the use of projection methods for these boundary integral equations. (Received February 08, 2005)