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**Darko Volkov\*** ([darko@wpi.edu](mailto:darko@wpi.edu)), 100 institute road, worcester, MA 01609. *A Numerical Boundary Eigenvalue Problem For Elastic Cracks in Free and Half Space.*

We present in this talk a numerical method for hypersingular boundary integral equations. This method was developed for planar crack problems: additional edge singularities are known to develop in that case. This study includes a rigorous error analysis proving the convergence of our numerical scheme. Three types of examples are covered: the Laplace equation in free space, the linear elasticity equation in free space, and in half space. (Received September 15, 2011)