Eq-013   Room: C102   Time: June 6 15:30-15:45

Piezomagnetic effects due to two-dimensional topography (2)

Shin'ya Sakanaka[1]

[1] Engineering and Resource Sci., Akita Univ

Stress concentration under a topographic surface is expected as one of the enhancement mechanism of the piezomagnetic effect. We used a numerical surface integral method over magneto-elastic medium to evaluate the piezomagnetic changes. It proved that the approximate functions of topography whose 2nd-order partial derivative is discontinuous makes discontinuous distribution of piezomagnetic changes. Since neglecting this effect in the last presentation, we put out a rather impractical result. Therefore this time we use Hermitian functions and sinusoidal functions, whose derivatives are continuous as to even their 2nd-order, for topographic models. Through the modeling, we employ the boundary element method to set the uniform stress field of extension and compression.