1057-35-216 **Mishio Kawashita*** (kawasita@math.sci.hiroshima-u.ac.jp), Department of Mathematics, Graduate School of Science, Hiroshima University, Higashi-Hiroshima, Hiroshima 739-8526, Japan.

Scattering for the Rayleigh waves in perturbed half-spaces.

In this talk, some problems arising scattering theory for the Rayleigh wave on perturbed half-spaces are considered. Here perturbed half-spaces mean the regions with the flat boundary $x_3 = 0$ in the outside of some ball $B_{R_0} = \{x \in \mathbb{R}^3 | |x| < R_0\}$. About the scattering of the Rayleigh waves, the following problems are considered:

1) to formulate scattering theory for perturbed half-spaces and to introduce the scattering operators and its distribution kernel called the scattering kernels,

2) to give a formula of the scattering kernel using the outgoing time dependent solutions,

3) to study where and how singularities of the scattering kernel corresponding to scattering of these waves on the boundary appears.

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