Shigehiko Kuratsubo* (kuratubo@cc.hirosaki-u.ac.jp), Hirono 1-17-6, Hirosaki-shi, Aomori-ken, Japan. A relation between multiple Fourier series and lattice point problems.

Lattice point problems are the branch of analytic number theory which is concerned with the number of integer points. These problems have a long history and very deep accumulations since E. Landau, J. G. Van der Corput, G. Voronoi and G. H. Hardy. Especially the researches of Czechoslovakian mathematician B. Novak (1938-2003) are very important. We are aiming to point out intrinsic relationship between lattice point problems and the convergence problems of multiple Fourier series. We will see a strong relation between these. The strongest motivation of this study was two preprints by M. Taylor. (Received September 03, 2011)