

Spherical mesh generator for solid earth simulation of broadband scale

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This presentation will propose the mesh generation for the spherical geometry, based on tetrahedral discretization. This scheme is efficient, deterministic, simple, and capable to distribute nodes within the mesh system, rather uniformly. It can be applied to many problems of solid earth science. The general important factors of mesh generation process and numerical simulation will be discussed in terms of the global study of elastic deformation of internal earth. The significance of the present approach will be also emphasized especially for elastic deformation studies of solid earth. Its extension to domain decomposition scheme will be discussed for the domain type numerical solution.