



Parallel Applications Infrastructure for the ESM

Ye Pu

Institute of Atmospheric Physics [U+FF0C] Chinese Academy of Science [U+FF0C] China (puye@lasg.iap.ac.cn)

Focusing on the Earth System Model based on structured meshes, a parallel application infrastructure called J-Earth and a modularized two-dimensional parallel coupler, which runs efficiently on supercomputers with thousands of cores, will be developed. In particular, useful adaptive local refinement techniques and efficient non-numerical parallel algorithms will be researched, and high-quality software modules will be encoded by means of inheritance, integration and development.