

Test Cases for Linear Advection Equation

Ramaz Botchorishvili

e-mail: ramaz.botchorishvili@tsu.ge

^aFaculty of Exact and Natural Sciences,
Ivane Javakishvili Tbilisi State University,
3, Chavhadze Avenue, 0179 Tbilisi, Georgia

Suitably selected analytical solutions are important for studying accuracy and performance of numerical methods in practical computational setting. New two dimensional tests are proposed for the linear advection equation. Case of divergence free as well as non-divergence free velocity vectors is considered. Application of these test cases in variational data assimilation framework is discussed.