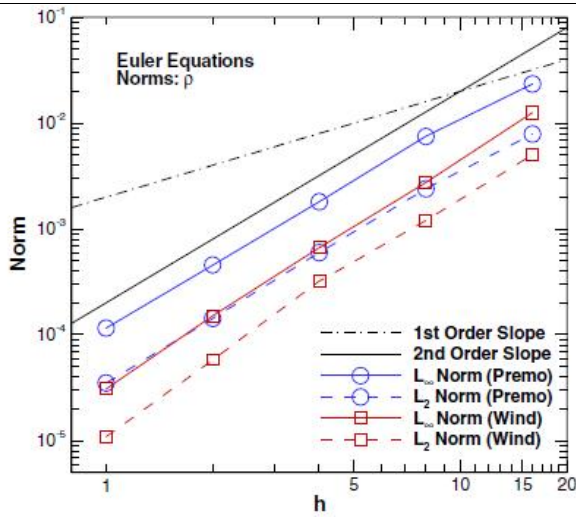


Support to Safety Analysis of Hydrogen and Fuel Cell Technologies

Verification type	Methodology
Database reference	MET-7
Topic / Application	Code verification Solution verification Manufactured Solution
Physics	General
Summary	This paper provides a comprehensive review of the processes that comprise verification of CFD codes.
Description	The method of manufactured solutions combined with order of accuracy verification is recommended for code verification, and this procedure is described in detail. Solution verification is used to estimate the numerical errors that occur in every computational simulation. Both round-off and iterative convergence errors are discussed, and a posteriori methods for estimating the discretization error are examined
Case Title	Review of code and solution verification procedures for computational simulation
Authors	Christopher J. Roy
Year	2004
Online reference	Journal of Computational Physics 205 (2005) 131–156
Case image	 <p>Global norms of the discretization error in mass density, from the verification via MMS</p>