

A Multifractal Subgrid-scale Model For Large-eddy Simulation Of Turbulent Flows

Gregory Charles Burton

A stochastic extension of the explicit algebraic subgrid-scale models 3 Oct 2012 . Multifractal subgrid-scale modeling within a variational multiscale method is proposed for large-eddy simulation of turbulent flow. Lehrstuhl für Numerische Mechanik: Ursula Rasthofer Multifractal subgrid-scale modeling within a variational multiscale . User:Oleg Schilling/Proposed/Turbulence: Large-Eddy Simulation . Scale-Invariance and Turbulence Models for Large-Eddy Simulation . and large scales of motion in turbulent flows are of much interest in large-eddy simulation ... The review starts with the Smagorinsky model, but the focus is on dynamic and similarity subgrid models and on ... Fractals and Multifractals in Fluid Turbulence. A fractal model for large eddy simulation of turbulent flow Multifractal subgrid-scale modeling for large-eddy simulation. ... simulation of turbulent flows, based on explicit evaluation of the subgrid velocity components ... Mathematical and Physical Constraints on Large-Eddy Simulation of . 1 Feb 2013 . Tags: backward-facing step large-eddy simulation multifractal subgrid-scale modeling square-section cylinder turbulent channel flow ... Multifractal subgrid-scale modeling within a . - ScienceDirect Large-eddy simulation (LES) refers to small scales elimination in the numerical . the very detailed review on turbulence subgrid-scale modelling carried out by C. for turbulence multifractal character at small scales reviewed by Frisch (1995). ... The SSF model works very well for isotropic turbulence, free-shear flows, and ... 12 May 2014 . The near-wall behavior of the multifractal subgrid-scale modeling ... for large-eddy simulation of passive-scalar mixing in turbulent flow at low ... Scale-Invariance and Turbulence Models for Large-Eddy Simulation . Development of large eddy simulation turbulence models A multifractal subgrid-scale model for the large-eddy simulation of turbulent flows . simulation (LES) of turbulent flows, which incorporates significant subgrid ... Multifractal Subgrid Scale Modeling For Large Eddy Simulation I . 5 Sep 2014 . large-eddy simulation, subgrid-scale modeling, Kolmogorov equation. PACS number(s): ... viding efficient tools for typical turbulent flows: Yu et al. [17] ... There are also mathematical attempts such as the multifractal procedure ... Large-eddy simulation of turbulent channel flow using explicit . A variational multiscale method with multifractal subgrid-scale modeling is proposed for large-eddy simulation of turbulent flow. In the multifractal subgrid-sc... Recent understanding on the subgrid-scale modeling of large-eddy . Title: A multifractal subgrid-scale model for the large-eddy simulation of turbulent flows. Authors: Burton, Gregory Charles. Affiliation: AA(University of Michigan). A multifractal subgrid-scale model for large-eddy simulation of turbulent flows. Front Cover. Gregory Charles Burton. University of Michigan., 2003. Multifractal subgrid-scale modeling for large-eddy simulation. I ... Scale-invariance and turbulence models for large-eddy simulation. C Meneveau, J ... A Lagrangian dynamic subgrid-scale model of turbulence. C Meneveau ... The multifractal spectrum of the dissipation field in turbulent flows. C Meneveau ... Multiscale and Multiresolution Approaches in Turbulence: LES, DES . - Google Books Result (2013) Comparative study of implicit and subgrid-scale model large-eddy simulation . (2006) Explicit small-scale velocity simulation for high-Re turbulent flows. Journal ... (2005) Multifractal subgrid-scale modeling for large-eddy simulation. ?A Fractal Model for Large Eddy Simulation of Turbulent Flow Keywords: Large eddy simulation; Fractal; Turbulence modeling 1. ... 41, The multifractal nature of turbulent energy dissipation - Meneveau, Sreenivasan ... 29, Subgrid-scale backscatter in turbulent and transitional flows - Piomeli, Cabot, et al. A multifractal subgrid-scale model for the large-eddy simulation of . computational fluid dynamics; turbulent flows; large-eddy simulation; two-phase . U. Rasthofer, V. Gravemeier, Multifractal subgrid-scale modeling within a ... A multifractal subgrid-scale model for large-eddy simulation of . Large Eddy Simulation of the Mixing of a Passive Scalar in a High-Schmidt Turbulent Jet . Many SGS scalar flux models have been developed for flows with low "On a Subgrid-Scale Heat Flux Model for Large Eddy Simulation of Turbulent of Passive-Scalar Mixing Using Multifractal Subgrid-Scale Modeling," Annual ... Large-eddy simulation of passive-scalar mixing using multifractal . from large-eddy simulation to modeling landscape evolution, Water Resour. Res., 42 ... opment in subgrid-scale modeling of turbulent flows is the so-called dynamic organized river basin landscapes: Fractal and multifractal characteristics,. a variational multiscale method with multifractal subgrid-scale . ?5 Aug 2014 . Previous article in issue: Three-dimensional numerical simulation of red ... (AVM4) for large-eddy simulation of turbulent variable-density flow at low ... In the multifractal subgrid-scale modeling approach, the subgrid-scale ... 25 Jul 2014 . Key words: Turbulent two-phase flow, Large-eddy simulation, Multifractal subgrid- scale modeling, Variational multiscale method, Extended ... Ursula Rasthofer Abstract: Results are presented from a new approach to modeling the subgrid-scale stresses in large-eddy simulation of turbulent flows, based on explicit . Application of dynamic subgrid-scale concepts from large-eddy . using multifractal subgrid-scale modeling. By G. C. ... Turbulent mixing is of particular interest to the modeling of reacting flows, such as those occurring in jet In contrast to DNS studies, large eddy simulations of passive scalar transport most. Meneveau C - Google Scholar Citations A new class of subgrid closures for large eddy simulation (LES) of turbulence is developed, . [40] have proposed a model based on the idea of scale similarity. ASME DC Journal of Fluids Engineering Large Eddy Simulation of . A multifractal subgrid-scale model for large-eddy simulation of turbulent flows. ... Development of large eddy simulation turbulence models / by Eric Pomraning. ????? - ?????? [4] U. Rasthofer, V. Gravemeier, Multifractal subgrid-scale modeling within a variational multiscale method for large-eddy simulation of turbulent flow, Journal of ... an extended algebraic variational multiscale-multigrid-multifractal . Multifractal subgrid-scale modeling within a variational multiscale method for

large-eddy . In large-eddy simulation (LES) of turbulent flows, large-scale, ... A multifractal subgrid-scale model for the large-eddy simulation of . Modeling and simulation of liquid pulsed particulate fluidized beds . Subgrid scale fluid velocity timescales seen by inertial particles in large-eddy ... in capturing preferential concentration of heavy particles in isotropic turbulent flows ... A multifractal model for linking lagrangian and Eulerian velocity structure functions. Multifractal subgrid-scale modeling for large-eddy simulation . - TASC Recent understanding on the subgrid-scale modeling of large-eddy . Descripción: Results are presented from a new approach to modeling the subgrid-scale stresses in large-eddy simulation of turbulent flows, based on explicit . Multifractal subgrid-scale modeling within a variational . - Scitation 29 May 2014 . Multifractal subgrid-scale modeling within a variational multiscale method ... An eddy-viscosity subgrid-scale model for turbulent shear flow: ... tensor eddy-diffusivity models, which improve large eddy simulation (LES) predic-. An algebraic variational multiscale-multigrid-multifractal method . 30 Sep 2014 . In the last 50 years, the methodology of large-eddy simulation (LES) has been greatly developed, while lots of different subgridscale (SGS) ...