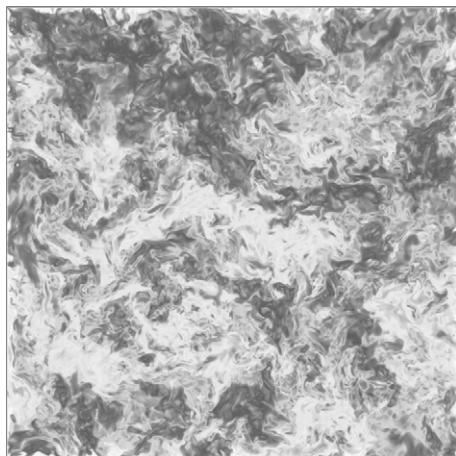


COMPTES RENDUS

PHYSIQUE

Tome 13 (2012) – N° 9–10



Turbulent velocity field from a direct numerical simulation of the Navier–Stokes equations,
from M. Wilczek, PhD thesis (2011).

DOSSIER

Structures and statistics of fluid turbulence / *Structures et statistiques de la turbulence des fluides*
Guest editors / Rédacteurs en chef invités : Laurent Chevillard, Michael Wilczek

• Foreword Laurent Chevillard, Michael Wilczek	865
• On the dynamical role of coherent structures in turbulence Nicholas T. Ouellette	866
• Geometrical statistics of fluid deformation: Restricted Euler approximation and the effects of pressure Yi Li	878
• Insight on turbulent flows from Lagrangian tetrads Alain Pumir, Aurore Naso	889
• A phenomenological theory of Eulerian and Lagrangian velocity fluctuations in turbulent flows Laurent Chevillard, Bernard Castaing, Alain Arneodo, Emmanuel Lévéque, Jean-François Pinton, Stéphane G. Roux	899
• The Lundgren–Monin–Novikov hierarchy: Kinetic equations for turbulence Rudolf Friedrich, Anton Daitche, Oliver Kamps, Johannes Lülfiff, Michel Voßkuhle, Michael Wilczek	929
• Gross–Pitaevskii description of superfluid dynamics at finite temperature: A short review of recent results Marc Brachet	954