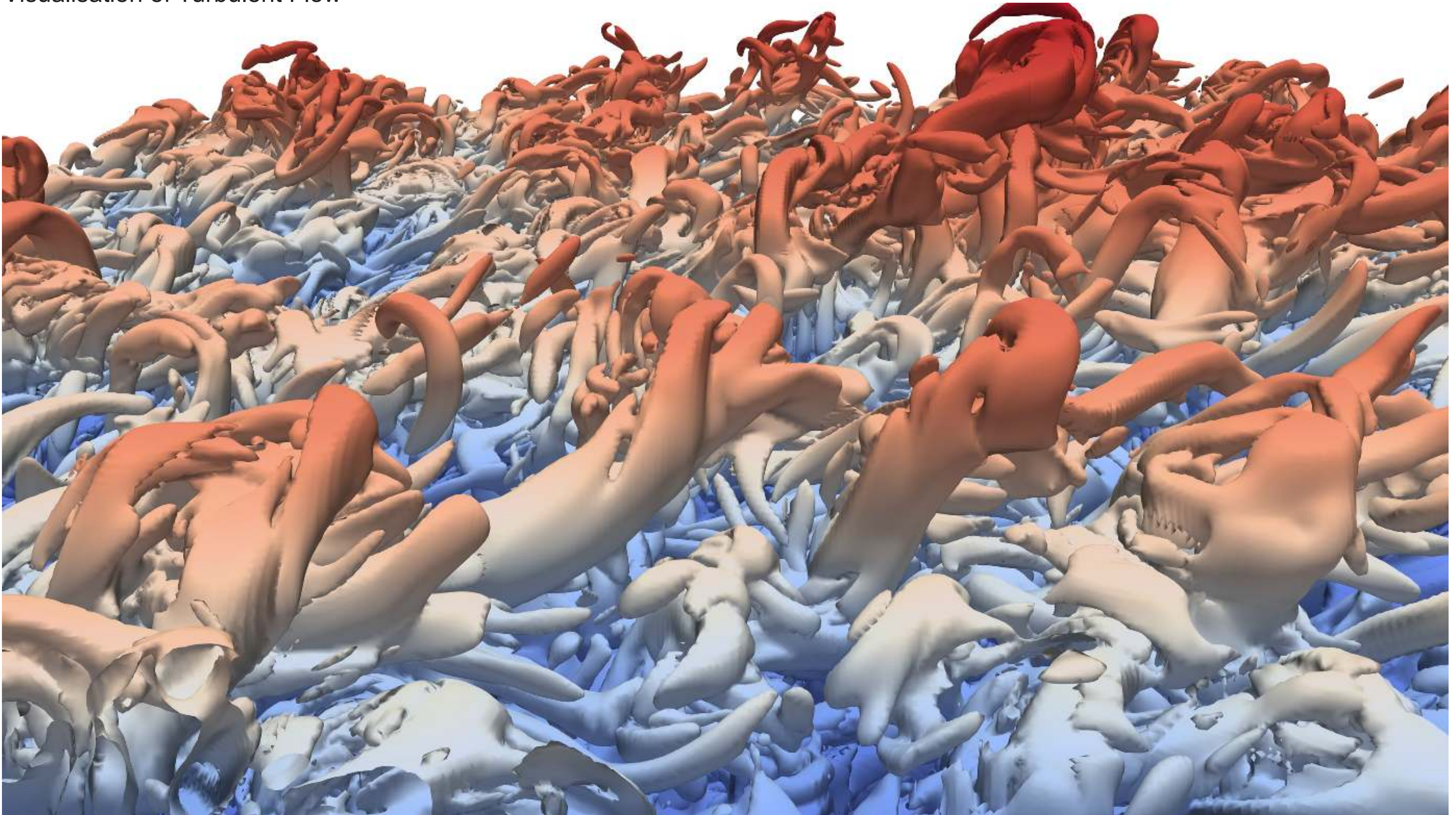# Visualisation of Turbulent Flow

Visualisation of the topology and dynamics of flow structures in wall-bounded turbulent flows [1,2]. Presented is an isosurface derived from the discriminant of the velocity gradient tensor (Da), with the resulting visualisation enabling the characterisation of complex vortical motions in turbulent flows. The turbulent flow exhibits a variety of arch- and cane-like vortex structures that evolve in time and space. The colour represents the distance of these structures from the wall.

[1] Mizuno Y, Atkinson C, and Soria J 2011 Topology and dynamics of flow structures in wall-bounded turbulent flows. J. Phys.: Conf. Ser. 318 062018 doi:10.1088/1742-6596/318/6/062018

[2] Mizuno Y, Amili O & Soria J 2012 The interface between the turbulent and non-turbulent regions in a turbulent boundary layer. First Multiflow Conference on the Turbulent-Nonturbulent Interface School of Aeronautics, Madrid, Spain.

Visualisation: Paul McIntosh, Multi-modal Australian ScienceS Imaging and Visualisation Environment (www.massive.org.au)
Data: Mizuno Y, Atkinson C, Amili O and Soria J, Laboratory for Turbulence Research in Aerospace and Combustion (LTRAC), Monash University
Visualisation Environment: Multi-modal Australian ScienceS Imaging and Visualisation Environment (www.massive.org.au)