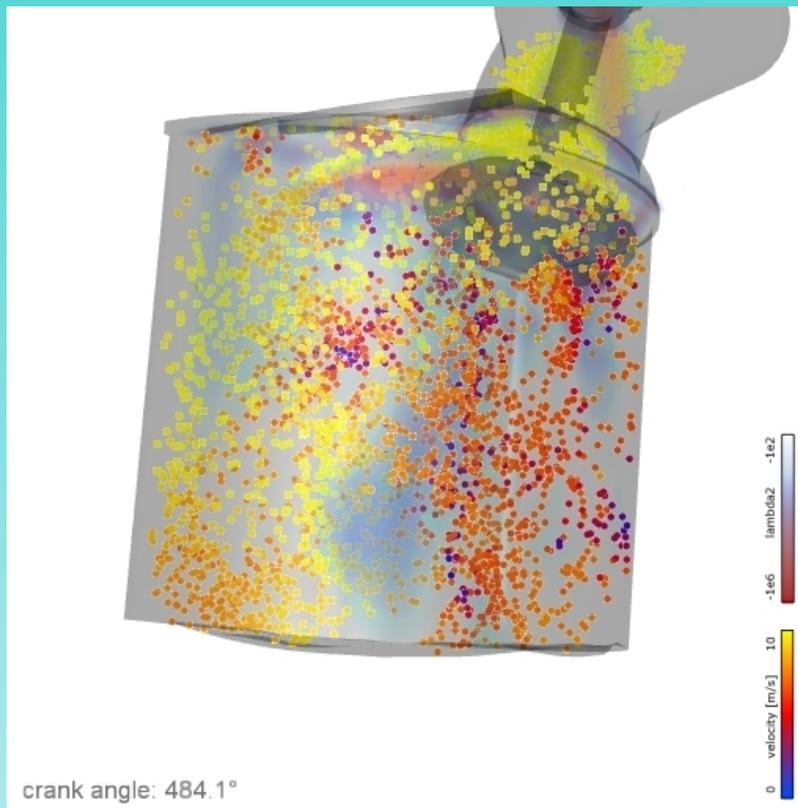


Manchester Computing/ESNW Seminar  
1400-1500 Friday 27 April 2007

## The Search for Meaningful Flow

Robert S Laramée, Swansea University



Swirl and tumble motion are two important, common fluid flow patterns from computational fluid dynamics (CFD) simulations typical of automotive engine simulation. We study and visualize swirl and tumble flow using several advanced flow visualization techniques: direct, geometric, texture-based, and feature-based. When illustrating these methods, we describe the relative strengths and weaknesses of each approach across multiple spatio-temporal domains typical of an engineer's analysis. The result is the most comprehensive, systematic search for swirl and tumble motion ever performed. Based on this investigation we offer perspectives on where and when these techniques are best applied in order to visualize the behavior of swirl and tumble motion.

Venue: Rm 1.10 Kilburn Building (ESNW Access Grid Node)

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URL: <http://www.mc.manchester.ac.uk/research/seminars/> <http://www.esnw.ac.uk/>