## Title of research project/activity

**Combined Full-Physics Aircraft Wake and Atmospheric Modelling of Droplet Deposition**

## Area of work (predictive models; field or wind tunnel research, etc.)

Polydisperse multiphase flow, atmospheric flow, forest management, computational fluid dynamics, parallel processing, droplet dispersion, aircraft wake modelling

## Summary description of project/work (please write about a 5-10 line summary)

Objective is to apply a CFD based unsteady physical model for droplet deposition (for aerial application of forestry pesticides) which takes advantage of next generation compact manycore parallel processing capabilities. Sub-objectives are: 1a) LES atmospheric boundary layer modelling, 1b) RANS aircraft wake modelling and 1c) combined atmospheric LES and aircraft wake RANS modelling. The resulting unified RANS/LES model will at first provide the opportunity to scrutinize and augment aspects of the AGDISP pesticide drift prediction utility.

## Schedule / Anticipated date for completion or availability of results

Research activities (4 graduate students) result in two intermediate reports due approximately September 2013 and two final reports September 2016.

## Name of researcher and organization (please specify country)

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