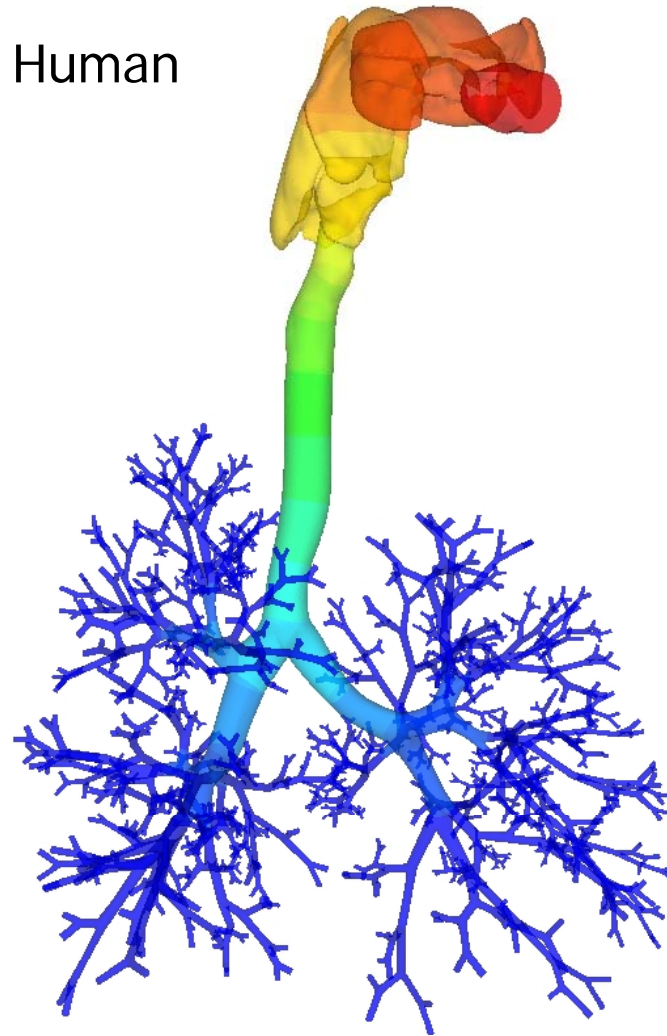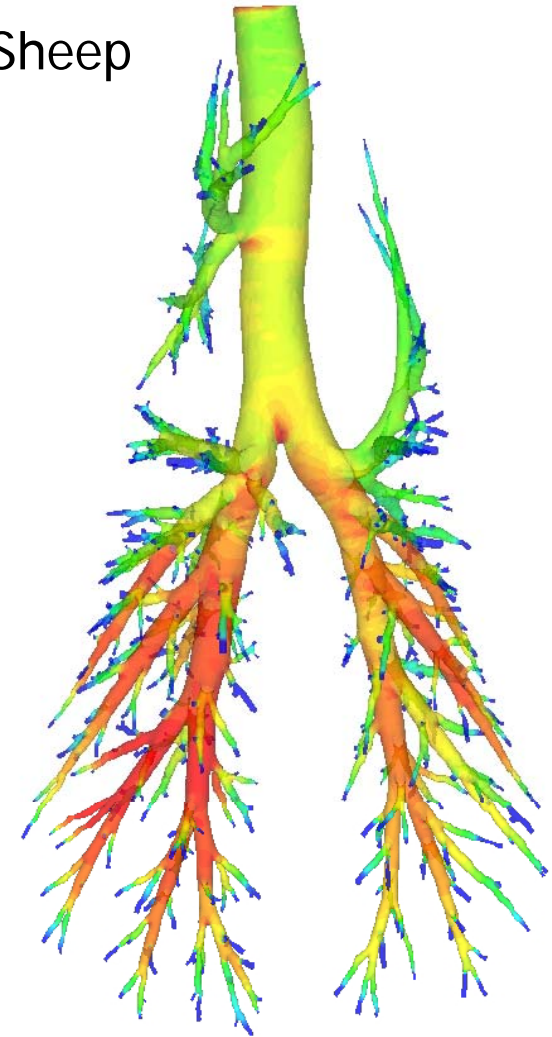# Multi-scale Simulation of Pulmonary Air Flow

Human
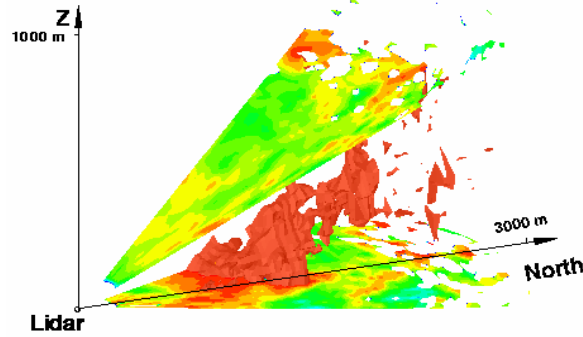
Sheep
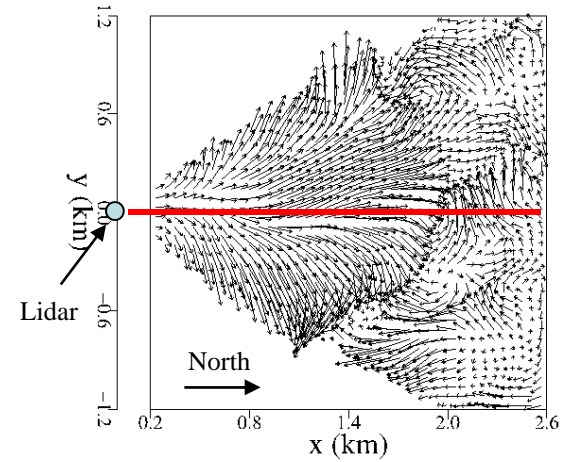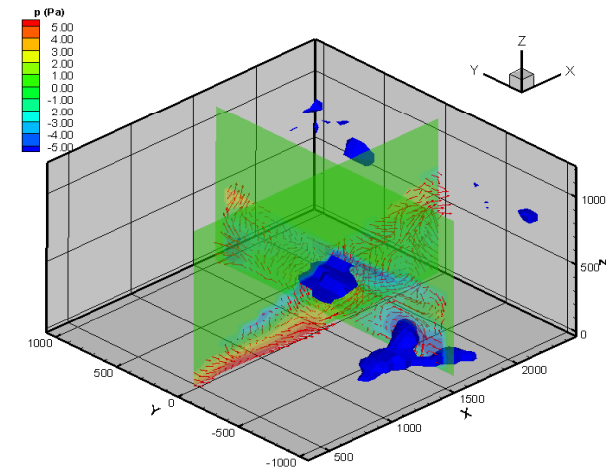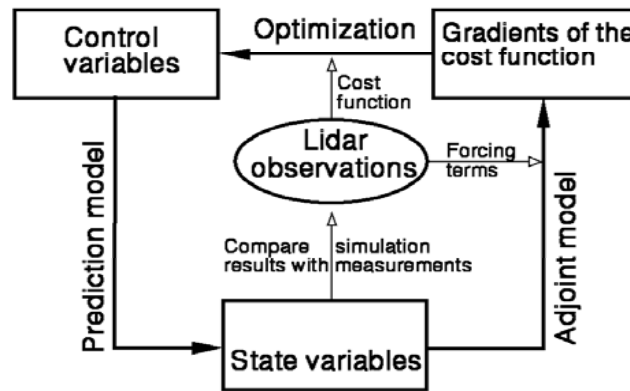
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4D Variational Data Assimilation

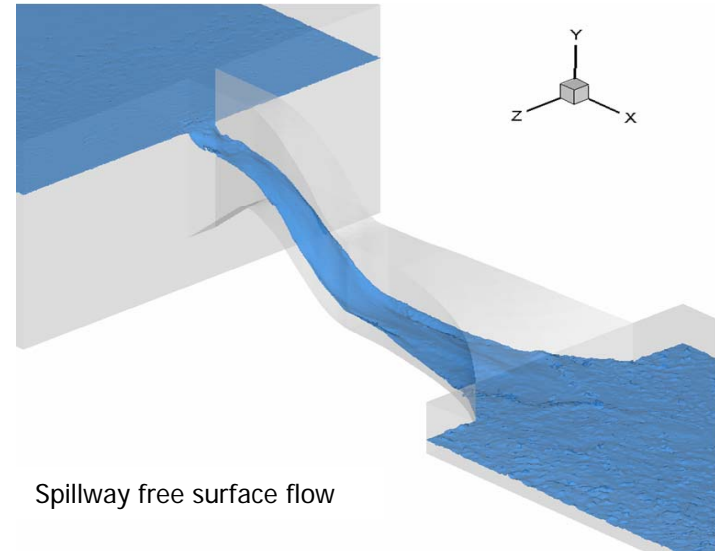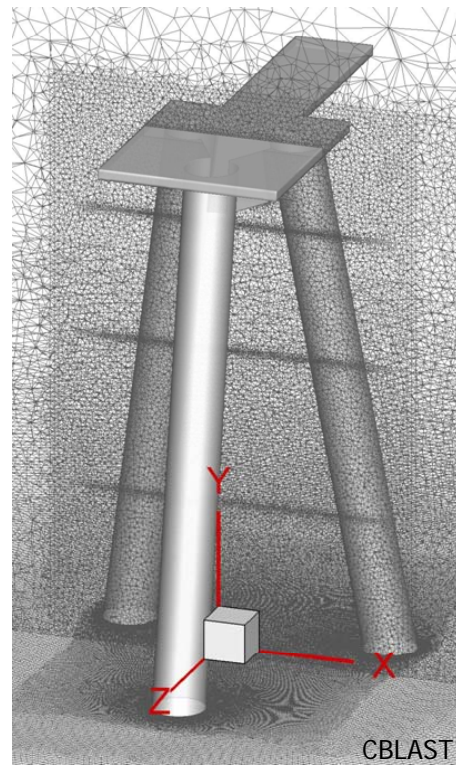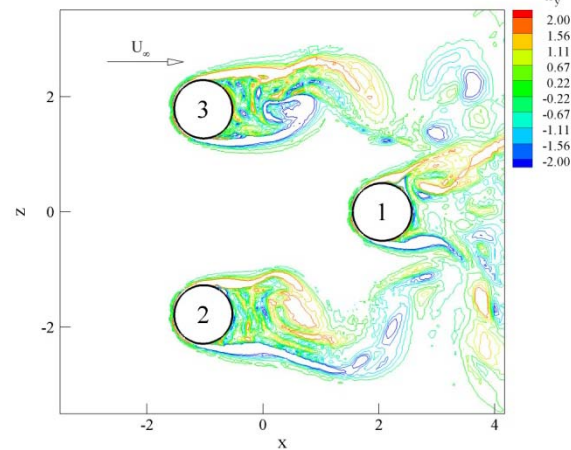Lidar radial velocity in ABL (Dr. Newsom)

Retrieved 3D wind field

Retrieved coherent structures

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Large-Eddy Simulation & Two Phase Flow

CBLAST

Spillway free surface flow
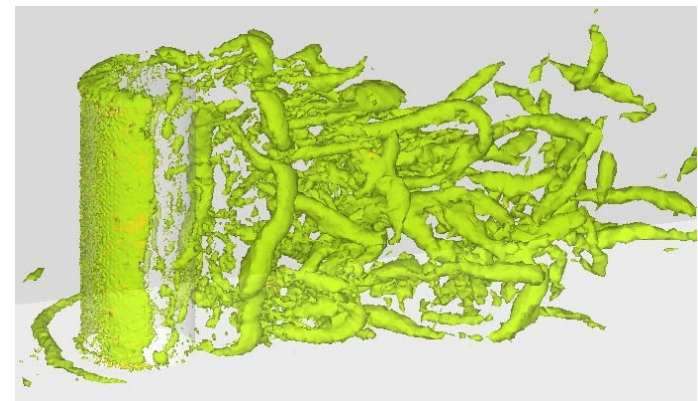
Coherent vortices in flow over a cylinder

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Mesoscopic Lattice Boltzmann Simulation

Micro flow through a fibrous porous media at various Knudsen number

Impact of a liquid droplet on a thin liquid film

Surface directed virtual wall dynamics in a microchannel
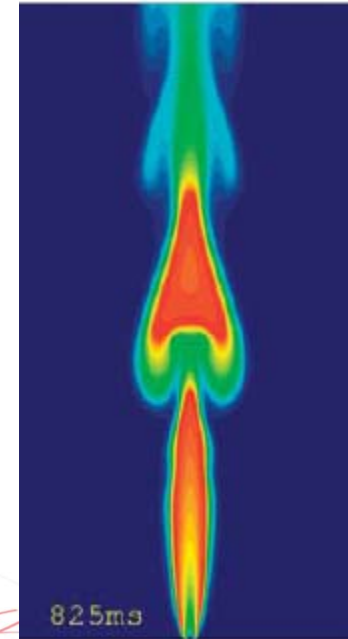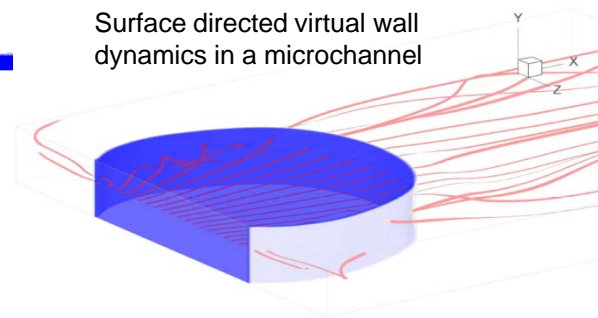
Laminar jet diffusion flame

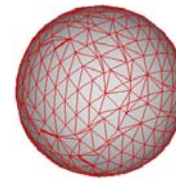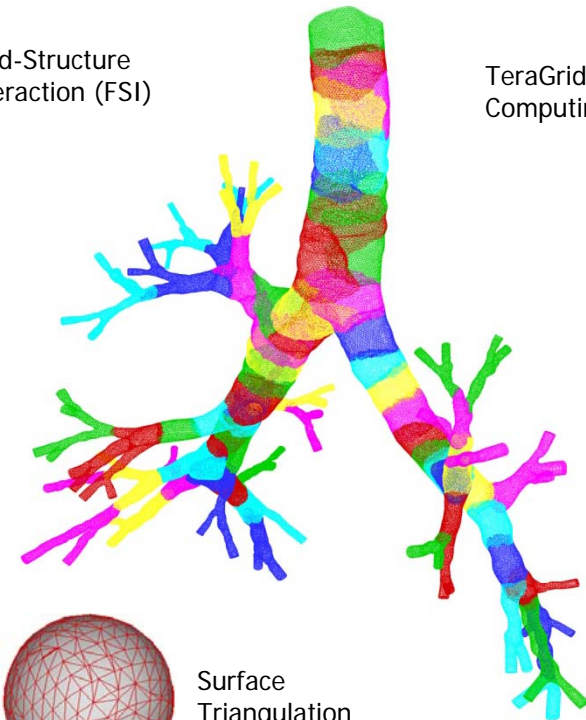ching-long-lin@uiowa.edu

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Fluid-Structure Interaction, Particulate Flow, Parallel Computing & Geometric Modeling
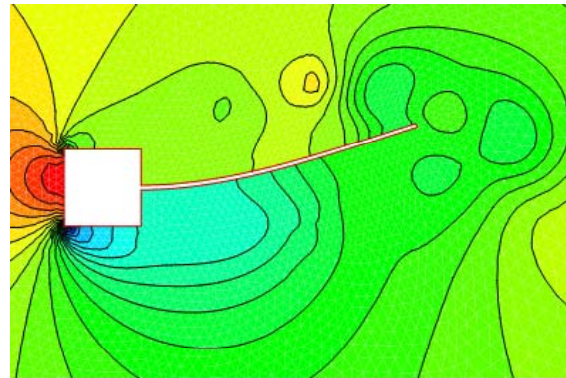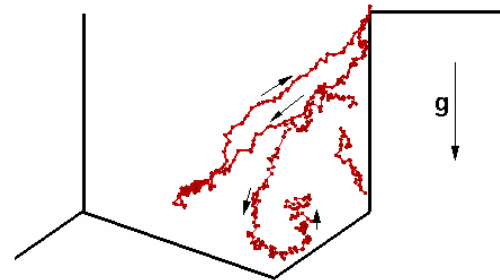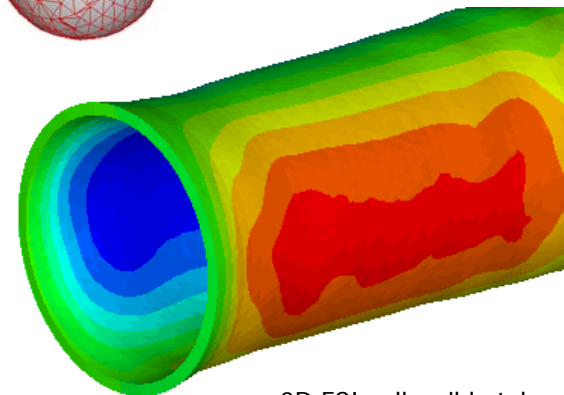

Fluid-Structure Interaction (FSI)

TeraGrid Computing

Surface Triangulation

Aerosol transport in 3D alveolar sacs with moving walls

3D FSI collapsible tube

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