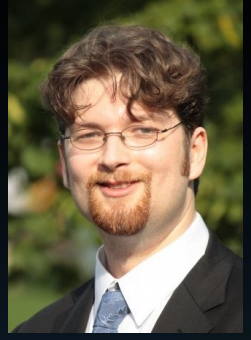
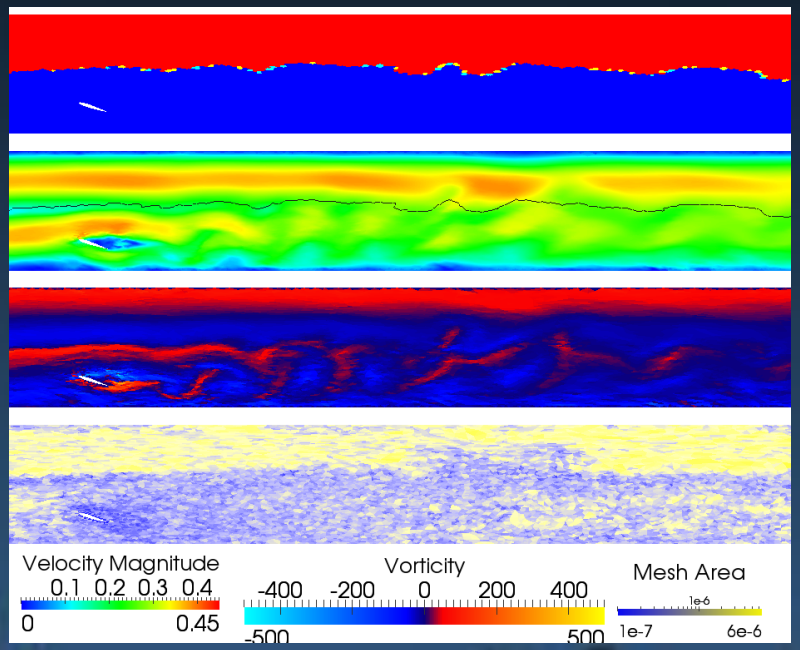


James Percival – RSM 4.85

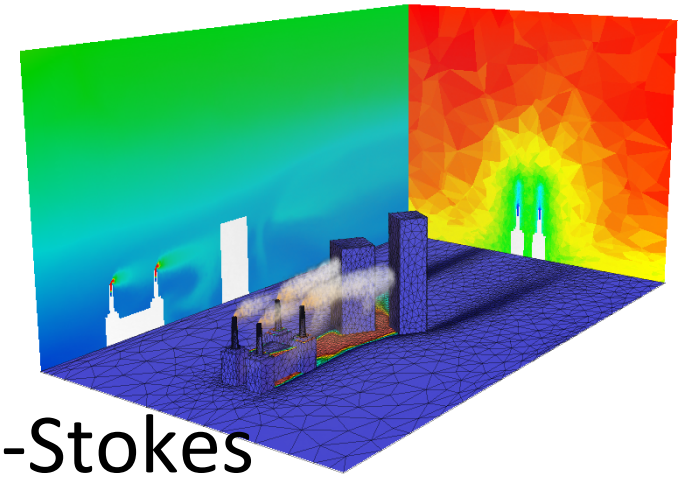
- Mathematician by training/inclination
- In “Multiphase group”
- Flows with more than one physical material

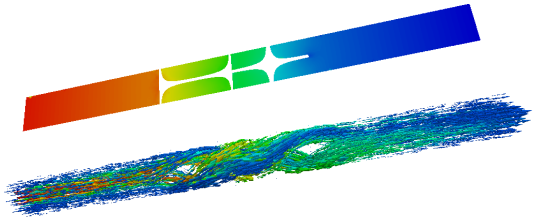


What I've worked on in AMCG:

Atmospheric code

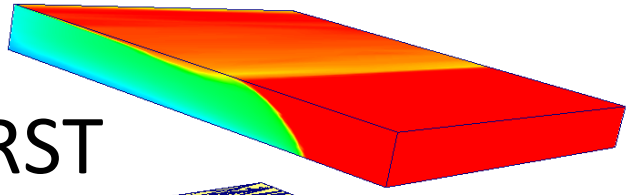
– ATHAM-Fluidity



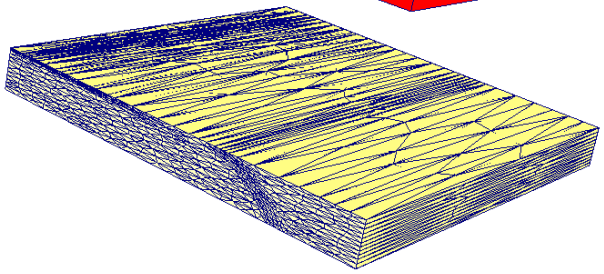


Multiphase Navier-Stokes

Multiphase Darcy equations for porous media – IC-FERST



Non-Newtonian Fluids



$$\frac{\partial \underline{\boldsymbol{\tau}_p}}{\partial t} + \boldsymbol{u} \cdot \nabla \underline{\boldsymbol{\tau}_p} - \left[(\nabla \boldsymbol{u})^T \cdot \underline{\boldsymbol{\tau}_p} + \underline{\boldsymbol{\tau}_p} \cdot \nabla \boldsymbol{u} \right] = \frac{1}{\lambda_1} \left[\mu_p \left[\nabla \boldsymbol{u} + (\nabla \boldsymbol{u})^T - \frac{2}{3} \underline{\boldsymbol{I}} \nabla \cdot \boldsymbol{u} \right] - \underline{\boldsymbol{\tau}_p} \right]$$