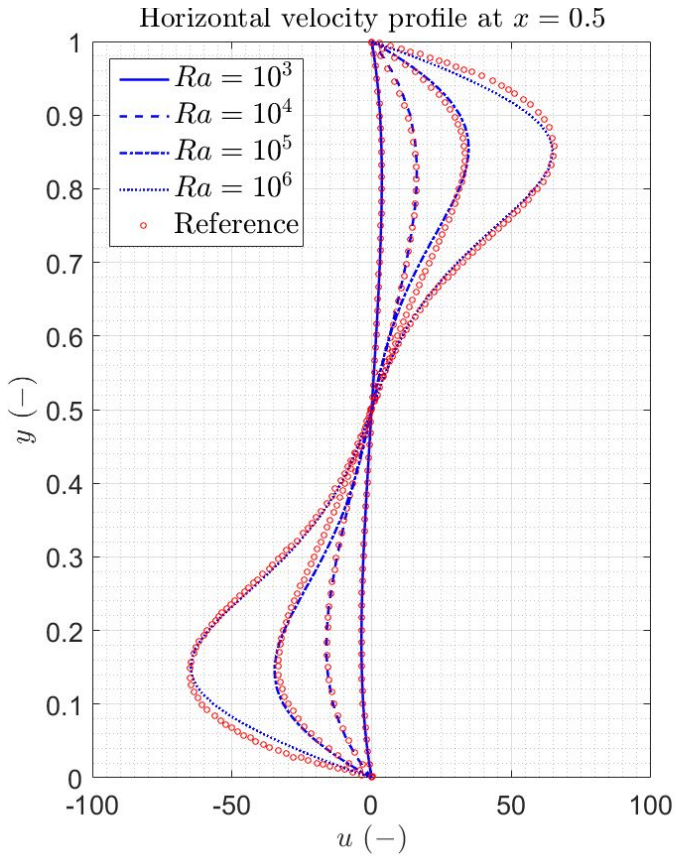
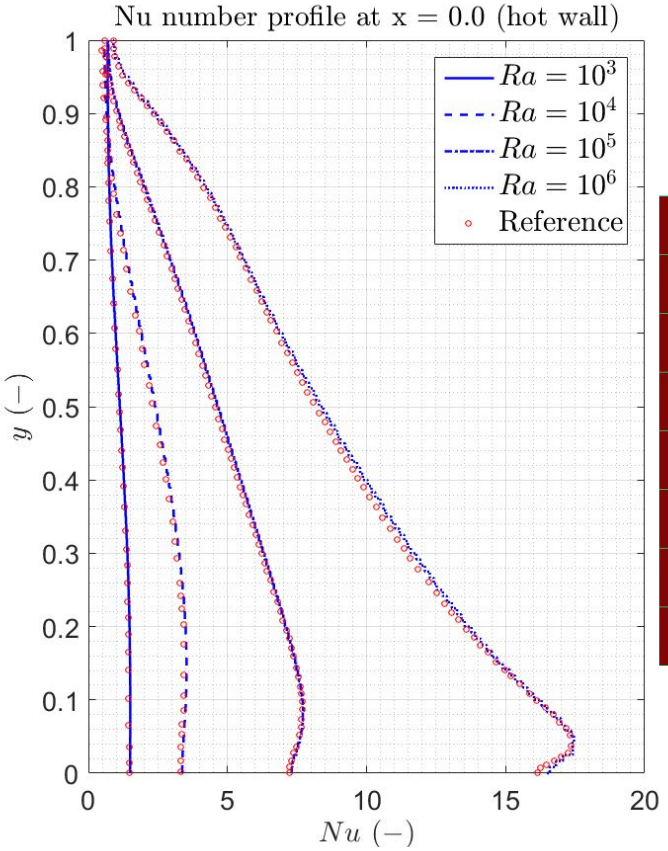
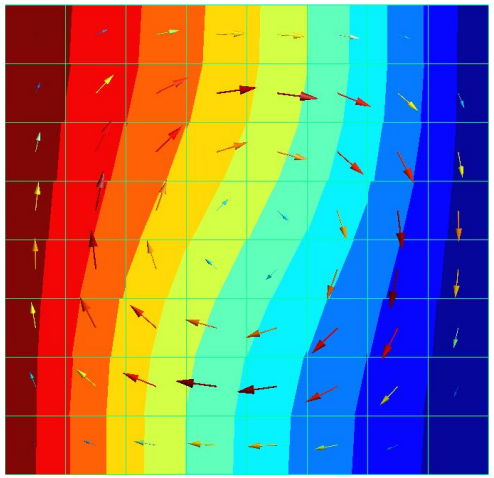
Task 2.3: Numerical Simulations on HX's (TU Delft)

- Done since last meeting:
  - Solve for enthalpy





Buoyancy-driven lid
(*T*- and *U*-fields)



sCO2 HeRo
The supercritical CO_2 heat removal system

Task 2.3: Numerical Simulations on HX's (TU Delft)

- Done since last meeting:
  - Solve for enthalpy
  - Support arbitrary material properties
    - (no libraries linked yet though)
  - Support general stress tensor ($\nabla \cdot \mathbf{u} \neq 0$)
    - Newly developed theory
  - Solve for conserved variables (e.g. mass flux, instead of velocity)
    - Newly developed theory for enthalpy
- We plan to publish these results.

Task 2.3: Numerical Simulations on HX's (TU Delft)

- D2.5: HT correlations for ATHLET: April 2018
- Next on our agenda:
  - A better time-stepping scheme
    - New theory for pressure correction scheme
  - Conjugate heat transfer
  - Couple with REFPROP (or other mat. prop. library)
  - An LES model
    - Still very unclear what's best