PhD in Energy and Mineral Engineering at PSU
Nicolás's Research - Reports

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Main discussion points:

- Cheng's paper
- LBM Code state
- Short-term Medium-term objectives

Bulk equation for the Shan-Chen force:

$$\mathbf{F} = -G\psi(x) \sum_i \omega_i \psi(x + \mathbf{c}_i \delta t)\mathbf{c}_i \quad \psi := \sqrt{\frac{2(P^{\text{EoS}} - c_s^2 \rho)}{G\delta t c_s^2}}$$

- MRT model
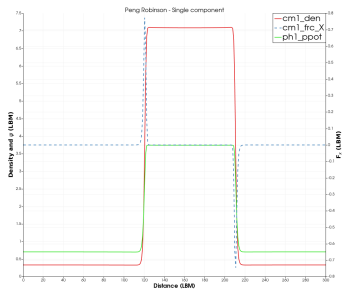- Multi-component partially miscible

LBM state

This I advanced before last state:

- Tried the binary printing (unsuccessful)
- Run the single component multi-phase model (successful)
- Equation to count the number of molecules in a lattice.
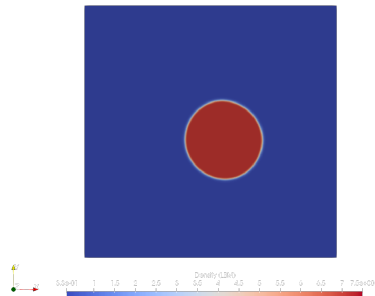- Short-term mid-term objectives

van der Waals validation
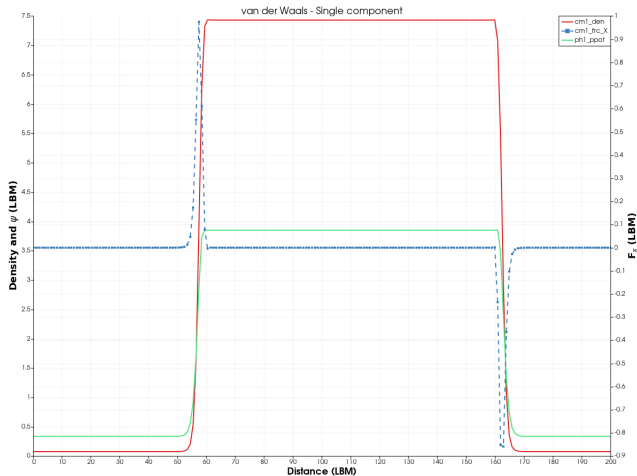
Peng Robinson validation

Figure

Where I am going?

I was rediscovering the concept of ψ that now belongs to the bulk (phase) entity. In Kruger's book is assigned to each component, so each components computes its own SC force. Other forces split according to ρ_i.
Two components structure is ready to start building the 2-component case that Cheng uses for validation.

Courses

Meeting with LBM questions

Questions:

- LBM Formulation
    - Are the equations molar/mass based? Which one should it be for efficiency?
- Boundary conditions
    - Composition for pressure BC at outlet or inlet

Present

Present...

Report XXX XX - 202X

Main discussion points:

- Topic 1
- Topic 2

Sample frame title

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- Text visible on slide 1

Sample frame title

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- Text visible on slide 2

Sample frame title

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- Text visible on slides 3

Sample frame title

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- Text visible on slide 1
- Text visible on slide 2

- Text visible on slide 4

In this slide

In this slide
the text will be partially visible

In this slide
the text will be partially visible
And finally everything will be there

Sample frame title

In this slide, some important text will be highlighted because it's important. Please, don't abuse it.

Remark

Sample text

Important theorem

Sample text in red box

Examples

Sample text in green box. The title of the block is "Examples".

Two-column slide

This is a text in first column.

$$E = mc^2$$

- First item
- Second item

This text will be in the second column and on a second tought this is a nice looking layout in some cases.