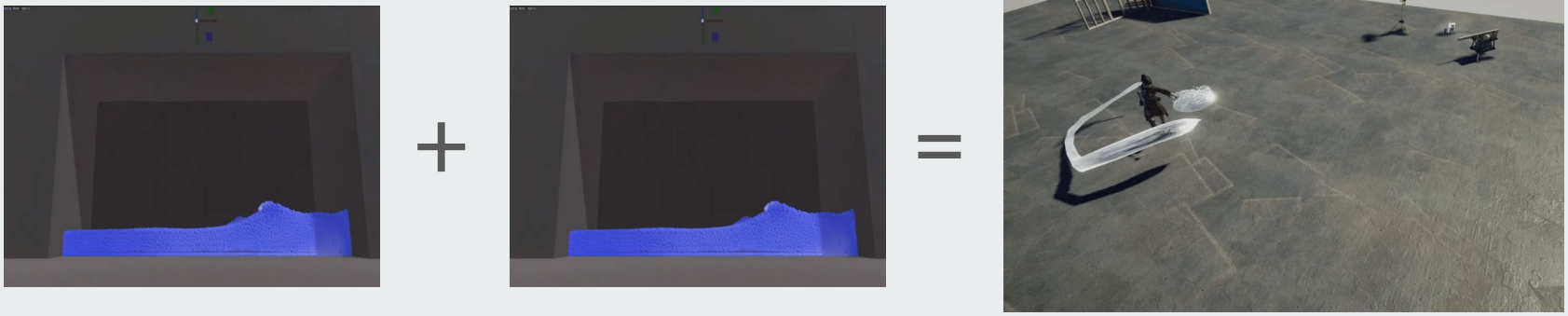
BREAKPOINT Milestone 3

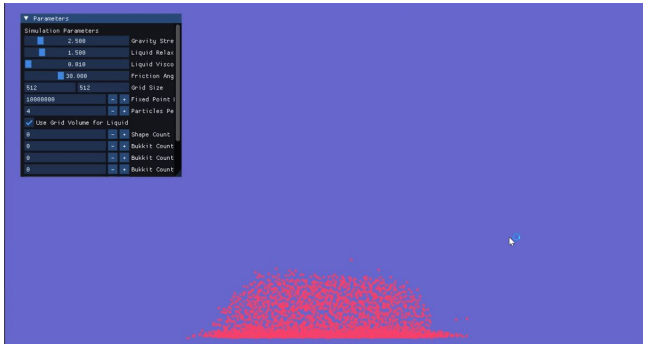


Daniel Gerhardt, Dineth Meegoda, Matt Schwartz, Zixiao (Steve) Wang

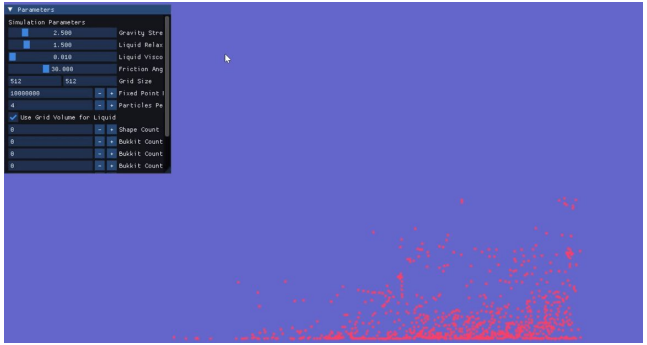
Adjustments to the Plan

- Dropping PBD
- Utilizing alternate PBMPM materials
  - Sand, snow
  - Planning on making a “solid”

Sand, but unstable because of volume loss



Snow

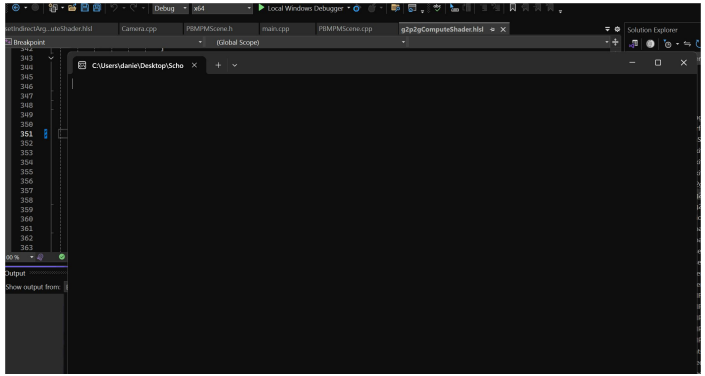


PBMPM Progress

- Move to 3D
  - Issue with force application and up-right movement
- Mouse force application
- Emission
- Overall bugs
  - Volume loss
  - Grid population

Mouse drag

Emission

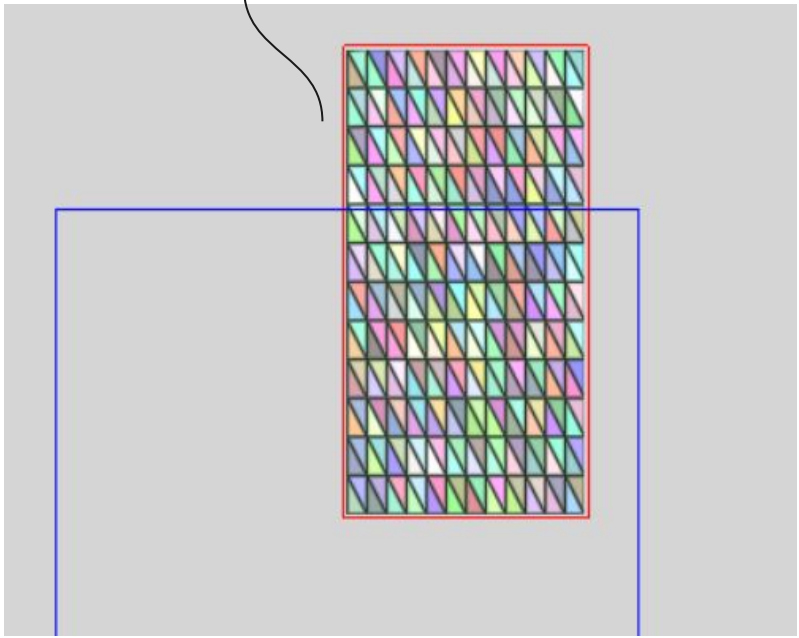


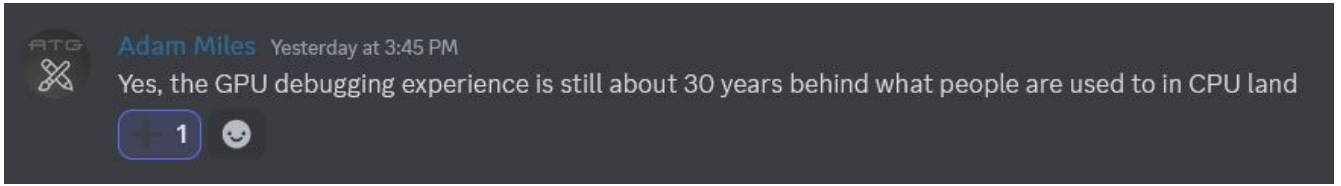
Fluid Shading Progress

Still got some bugs, but we're very, *very* close!

- For certain configurations we get the expected results
- Next steps: after fixing remaining bugs, plug in alembic data from paper's repo to test realistic liquids.
- Then: integrate with PBMPM for full mesh-shaded fluid sim.
- Bonus: benchmarking against original paper

PIX debugger mesh shading output





What's Left?

- PBMPM fixes
  - Fix volume loss and grid population
  - Fix 3D forces/weights
- Finish fluid shading
- Adapt fluid mesh shading for taking in PBMPM liquid particles