A Simple Idea

Known Limitations

Intractable

Usually, we make strong hypothesis to reduce the complexity, we coarsen the mesh

How about zeroing solving, but learning instead

Inflexible

Mesh is fixed, cannot be changed once the model is converged. Post-processing interpolation has limitations

Mesh-free implementations, adjustable on-the-fly with finer grain mesh, neural models have nice generalization properties

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Let's just capture Physics with a huge, smart, neural model