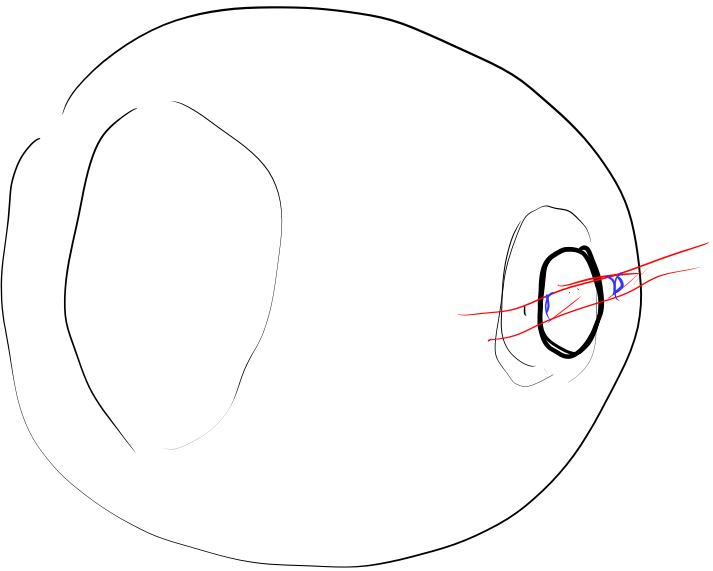
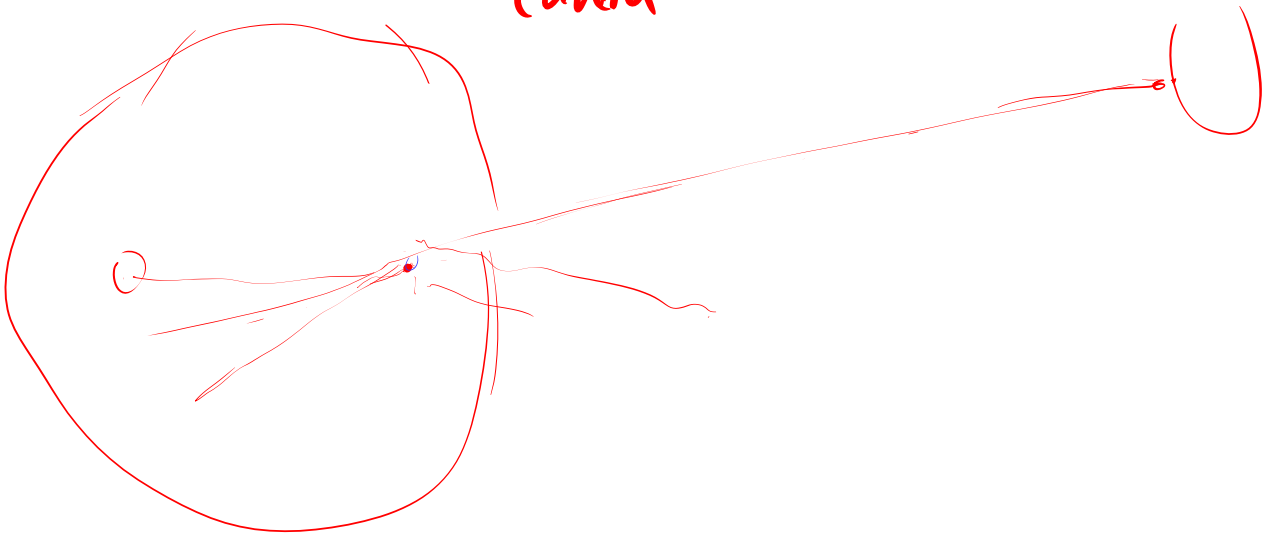
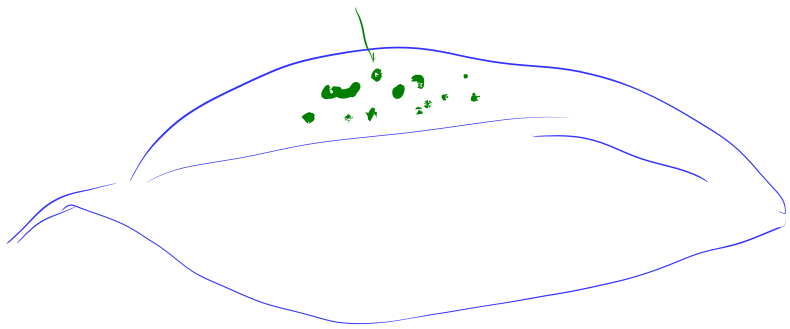
Squint



Pinhole camera





fluids

- gassos
- liquid

Lagrangian

many particles

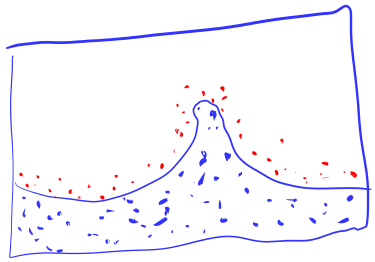
Smoothed-particle hydrodynamics

SPH

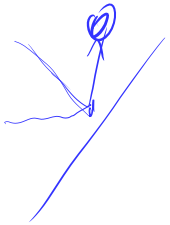
incompressible

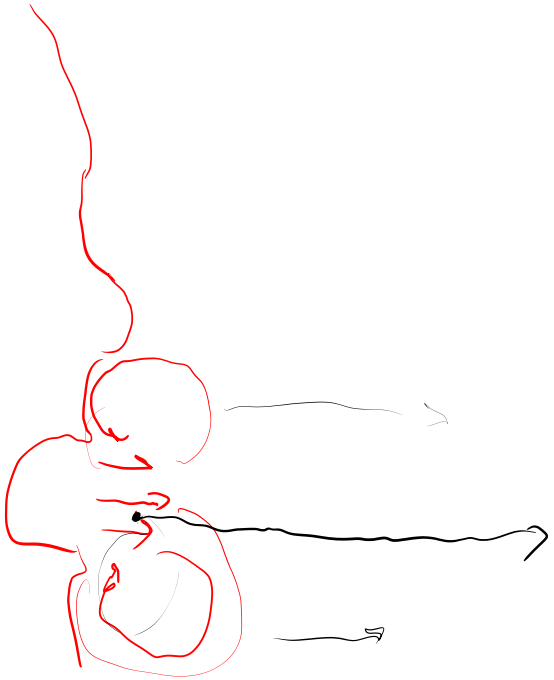
self-advection

Momentum



gas's Particle



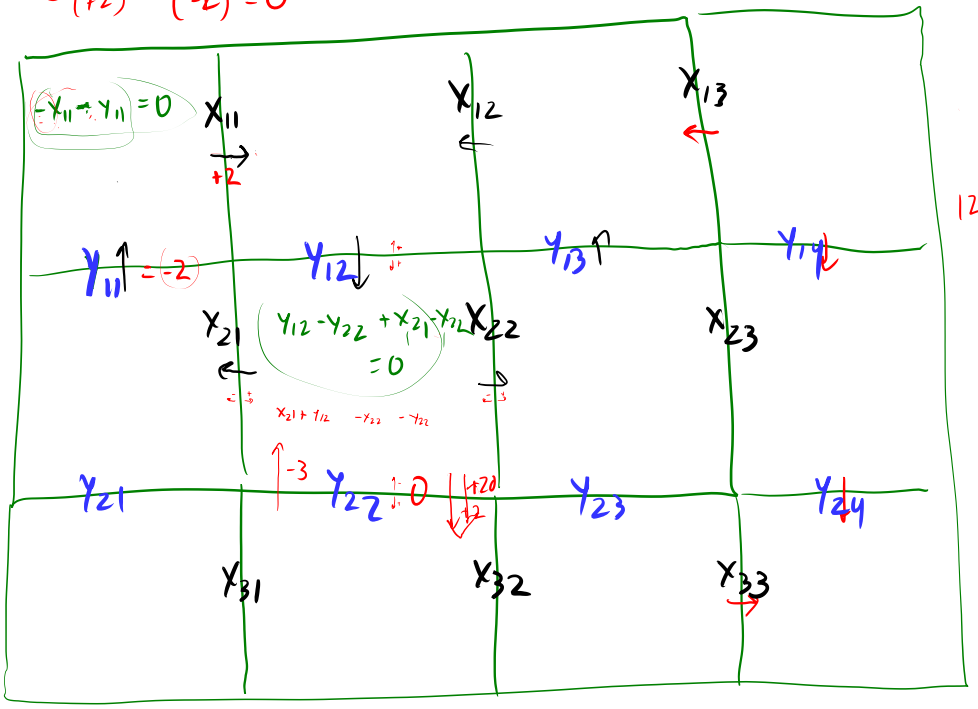


Eulerian

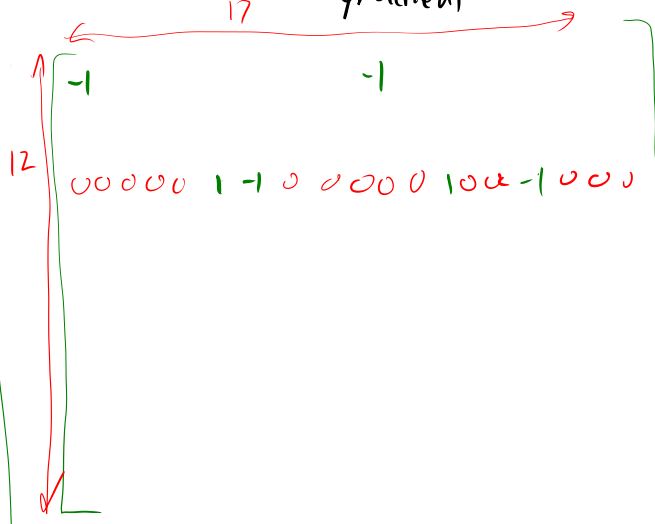
fixed grid

+ inflow
- out

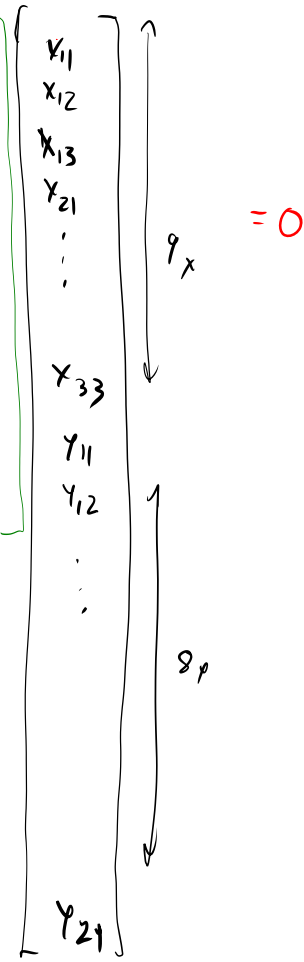
$-(+2)-(-2)=0$

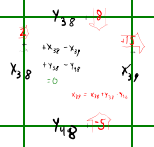


vector field
→ · divergence-free ★
· gradient



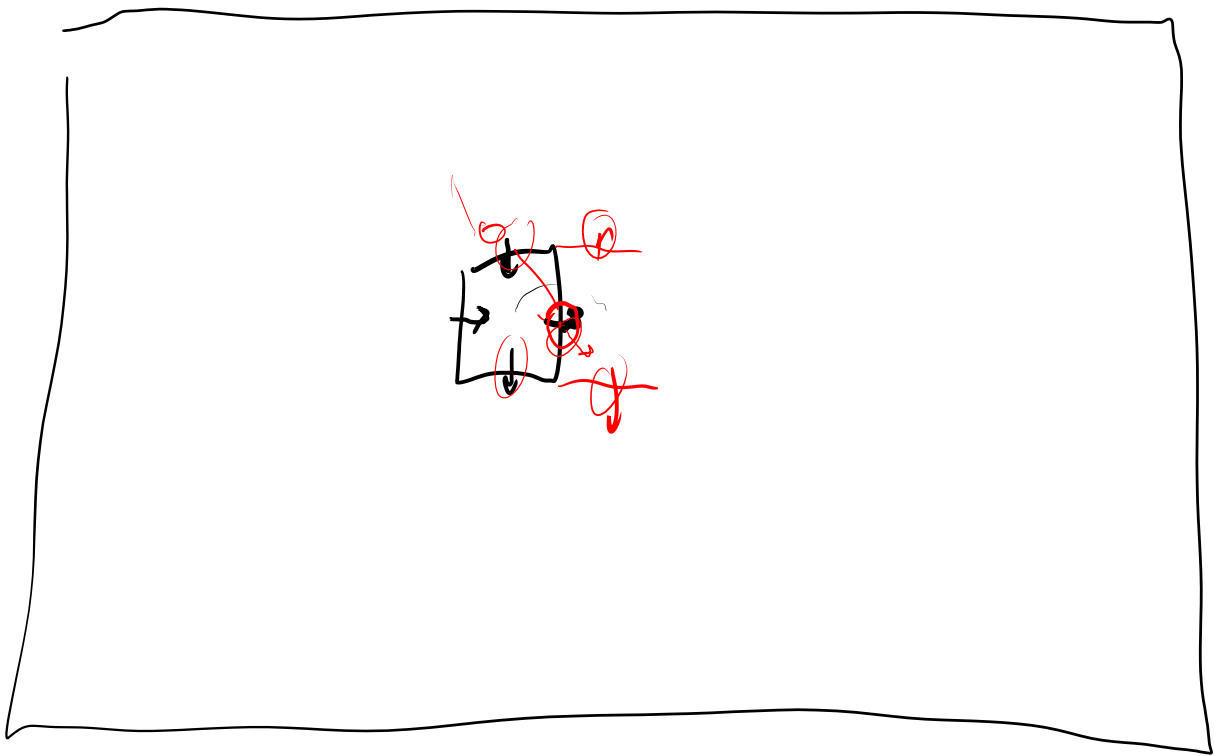
$$A\vec{x}=\vec{b}$$





Euler

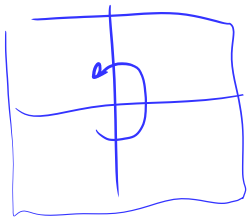
1. handle external forces
2. use LA to make non-divergent
3. self-advect

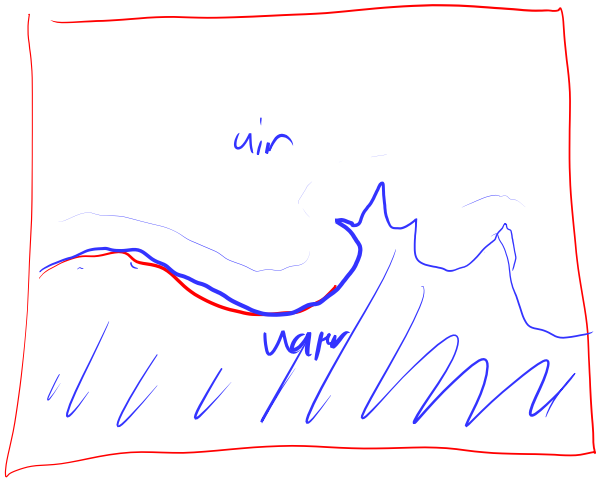


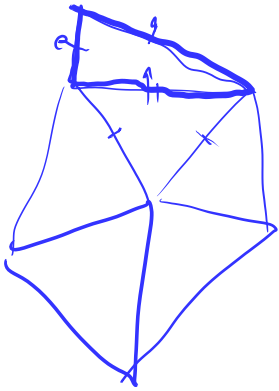
Fluids require pressure

energy

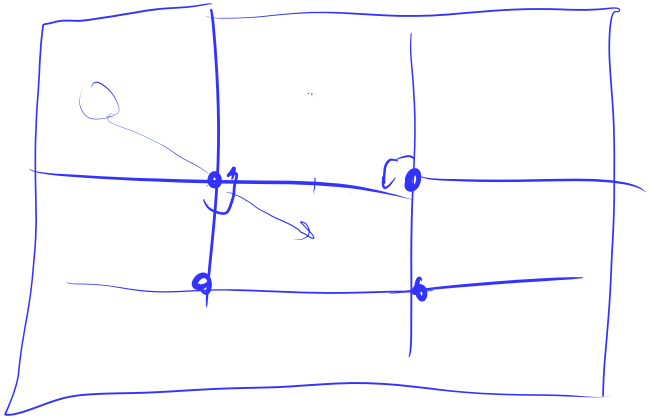
$K = m(\vec{v} \cdot \vec{v})$





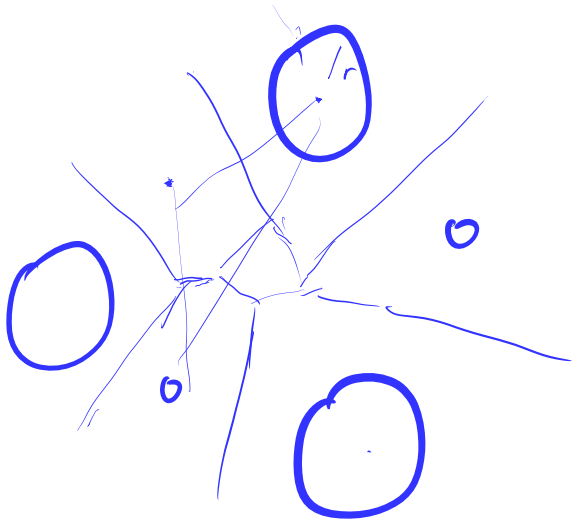


Circulation

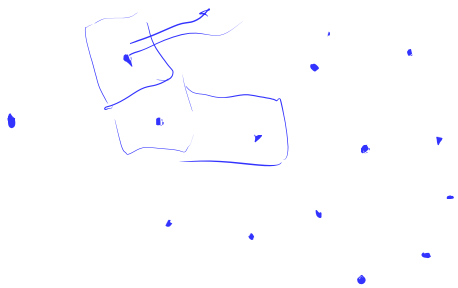


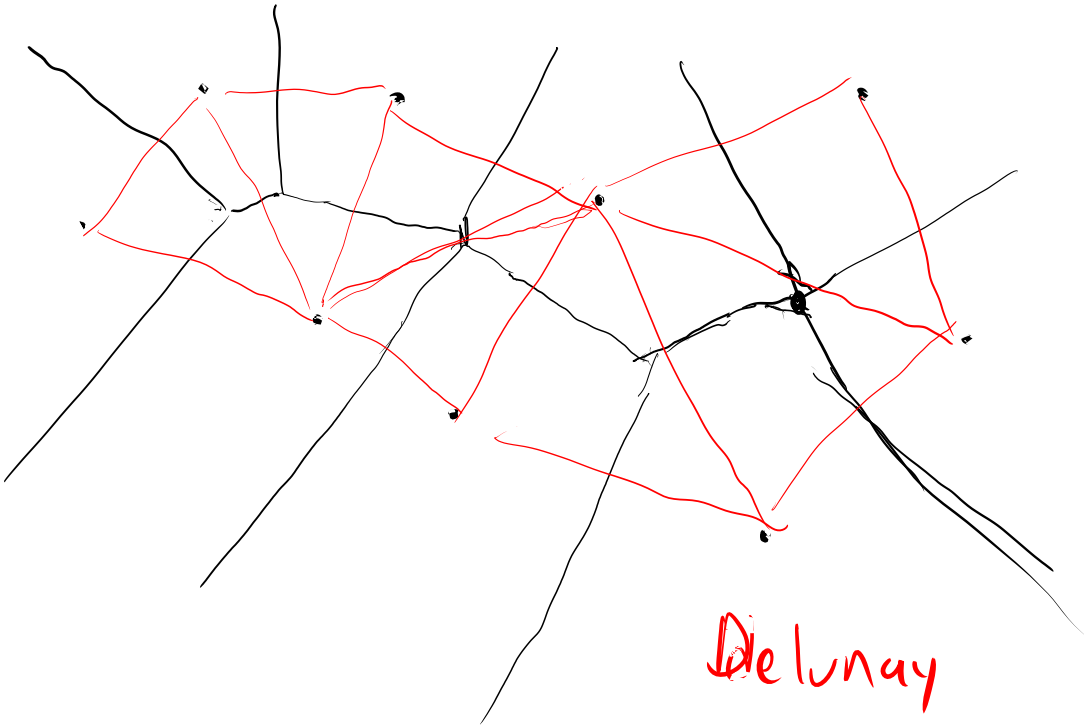
Voronoi Diagrams

Power Diagram



Power Partition





Delaunay Triangulation