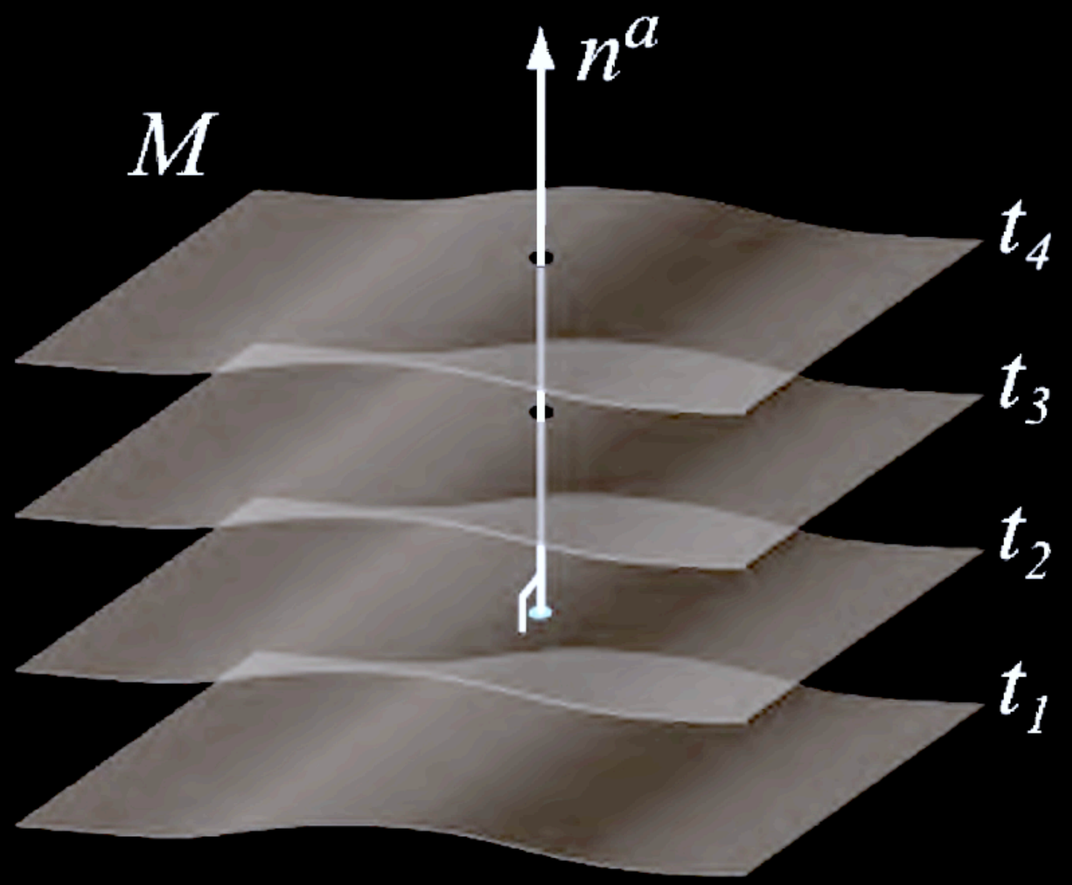
CURVED, DYNAMICAL SPACETIME

- It is intuitive to break 4D spacetime into 3D slices
- Each slice is a moment in time
- Can think of spacetime as a 3D surface changing over time
- This is how it is simulated in practice



NUMERICAL RELATIVITY

- We *don't* just add new forces to CFD codes
- Must use *relativistic* equations for gasses, radiation, etc.
- Generalize all geometry to dynamical curved spacetime: vectors, tensors, volumes, derivatives,…
- Solve Einstein's equations to determine spacetime curvature