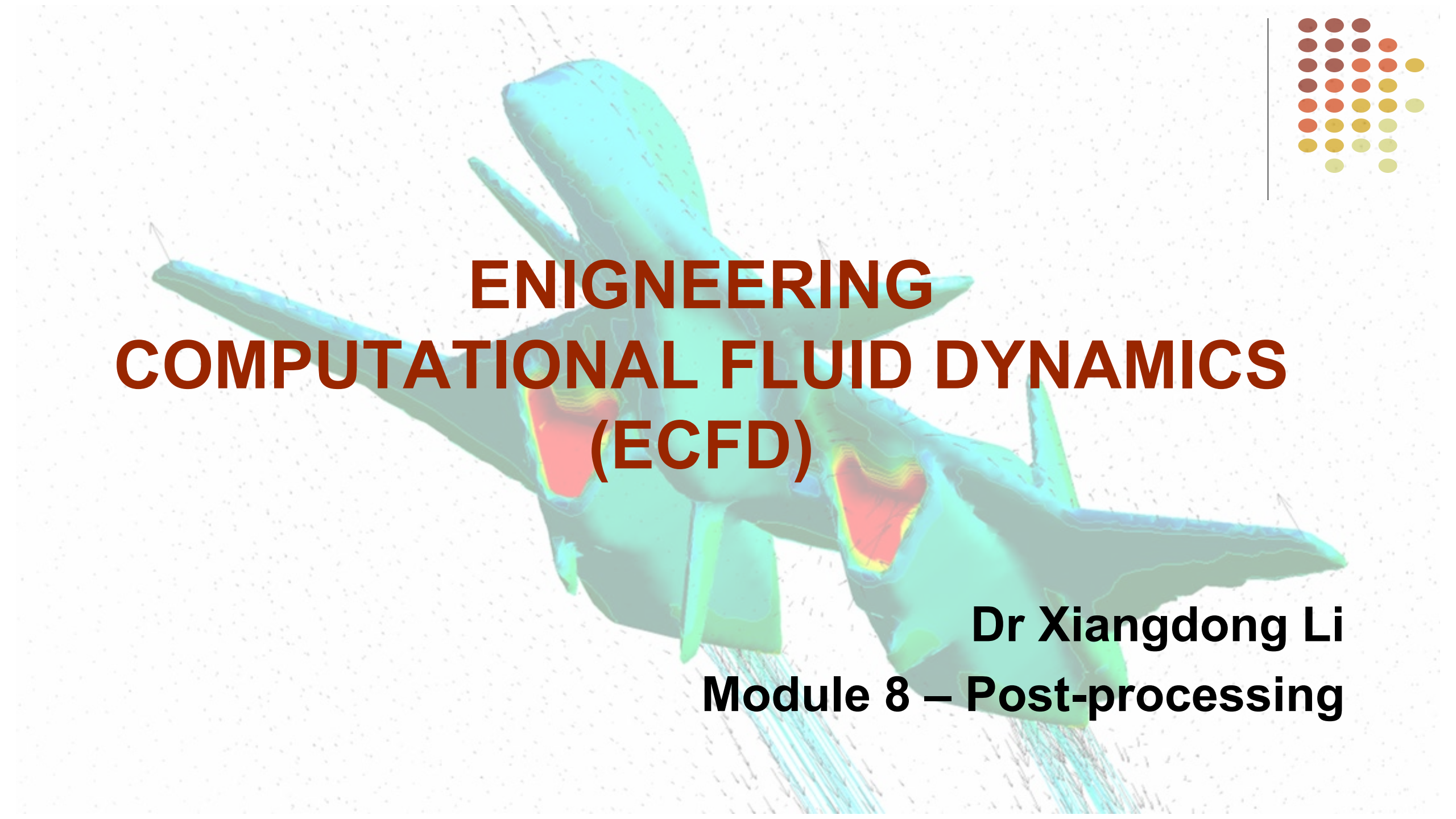
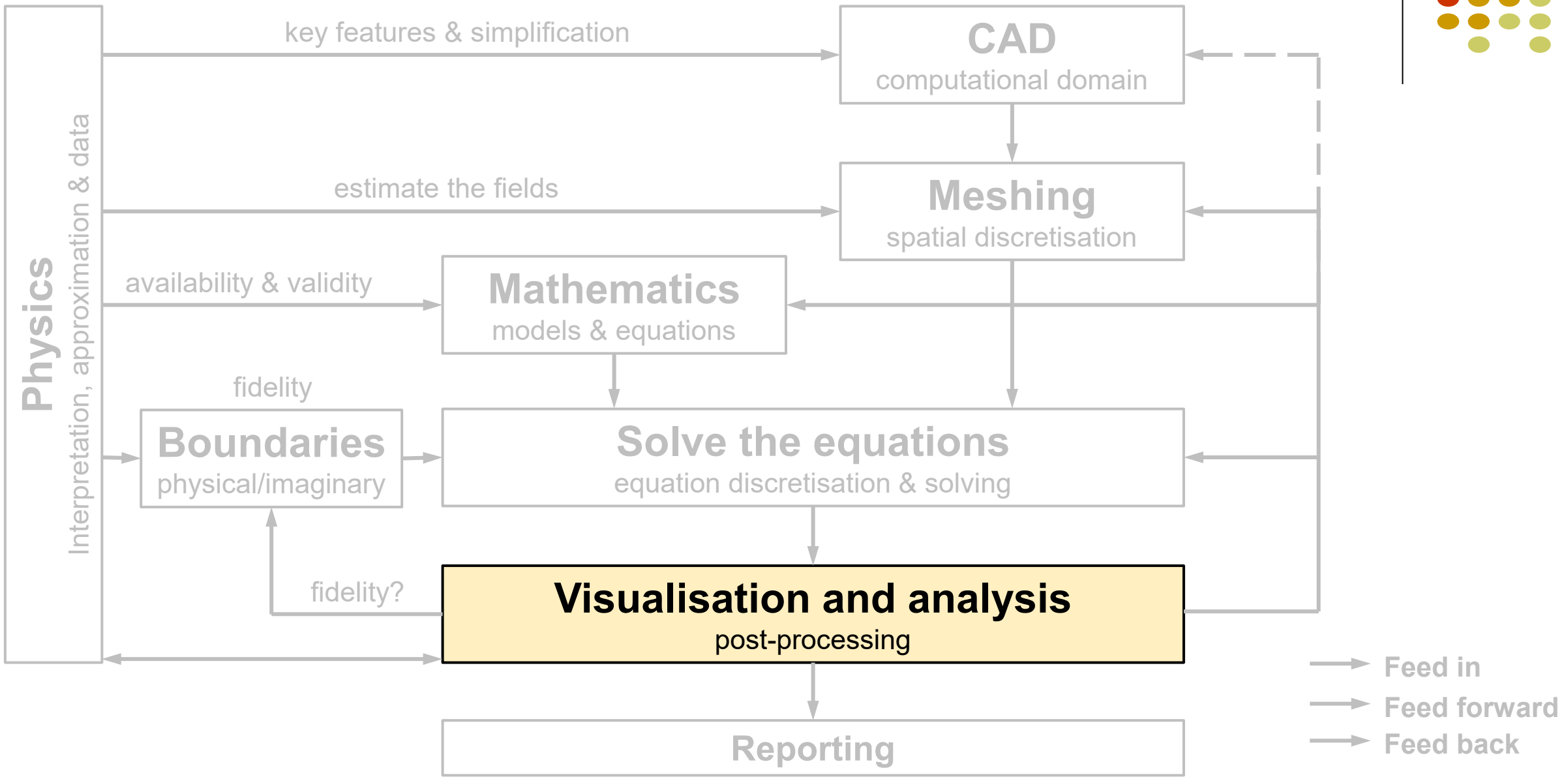


ENIGNEERING COMPUTATIONAL FLUID DYNAMICS (ECFD)

Dr Xiangdong Li

Module 8 – Post-processing

CFD workflow



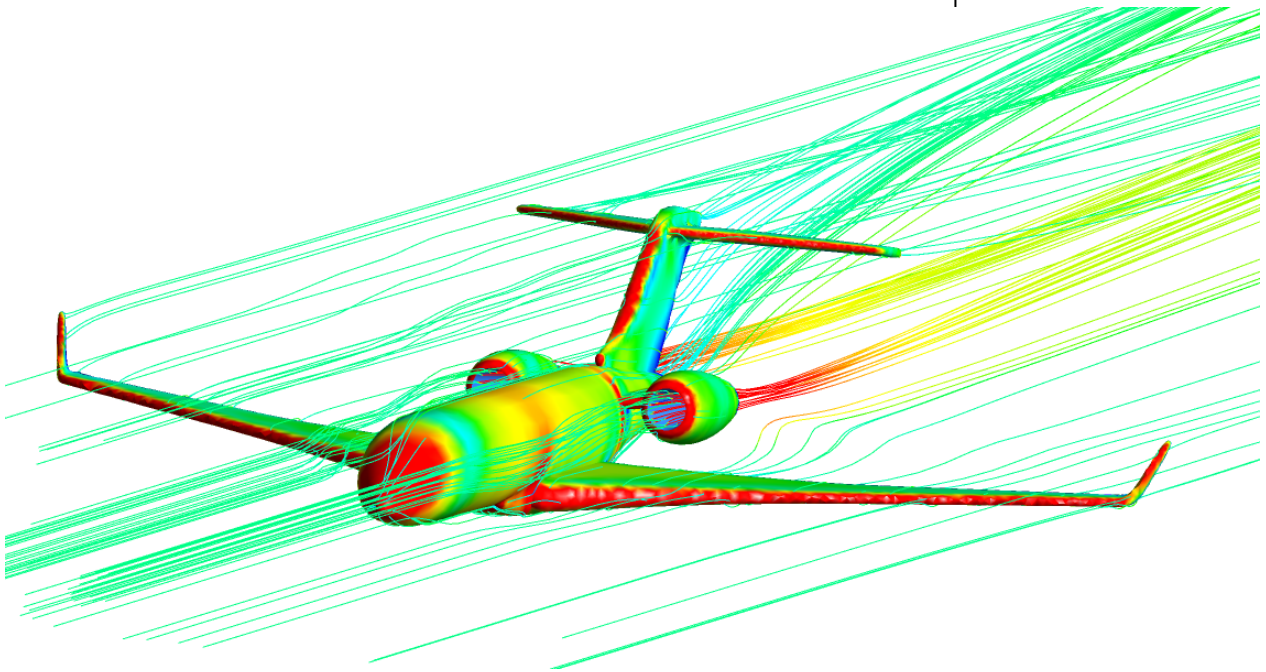
This module

- Manipulate CFD results using CFD-Post
- Visualise and analyse the flow field
- Plot data using 1D, 2D, 3D and time-dependent methods
- Calculate critical data
- Export data or further analysis

Why post-processing?

- Visualise the results
- Analyse the results
- Demonstration and presentation

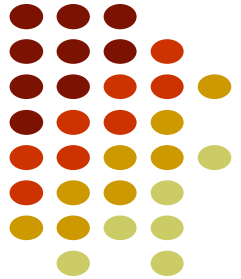
The quality of CFD simulation is largely determined by post-processing



Post-processing tools

- **CFD-Post**
- Fluent post-processing module
- Tecplot
- Many more …

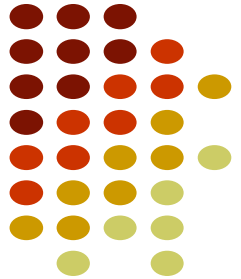
Graphics and alphanumerics



Results can be viewed in

- Graphics
  - Domain rendering
  - Plot data in 1D/2D/3D domains
  - Plot time-related changes
  - Visualise the fields
  - Generate figures
  - Generate animations
  - Export data
  - …
- Alphanumerics
  - Find max/min values
  - Calculate force, average, mass flow rate, volume, surface, ….
  - …

Today's topics



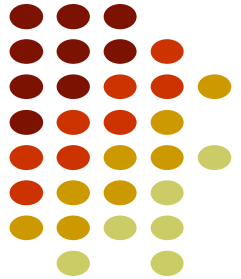
Plots

- 1D plots
  - X-Y plots
- 2D plots
  - Surface rendering
  - Contours
  - Vector plots
  - Oilflow lines
- 3D plots
  - Volume rendering
  - Iso-surface
  - Vector plots
  - Streamlines

Data export

Calculators

Animation



LET’S DO IT