Initial Conditions, Boundary Conditions

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Initial Conditions

- In steady state, initial conditions can affect rate of convergence
- Nearer the solution the better
- In transient calculations, initial conditions are critical
- Represent conditions at t=0

Initial Conditions

- Can set initial conditions:
- Fixed value over domain
- Fixed value over initial subdomain
- From existing solution on disk
  - Grid must correspond exactly

Initial Conditions

- Default initial conditions are:
- Temperature at global ambient

Boundary Conditions

- Boundary conditions
- At solid-fluid surfaces friction is applied as sink of momentum
- Heat transfer applied as heat source in fluid, heat sink in solid
- Resistances act as sink of momentum

Boundary Conditions

- Fixed flows & external fans act as sources of mass and momentum
- Internal fans act as sources of momentum

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