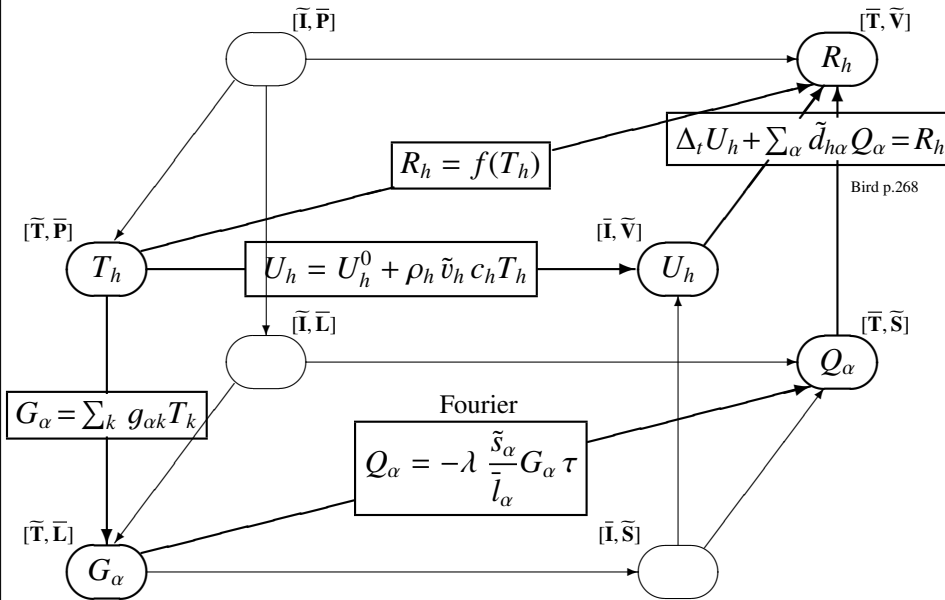


Thermal conduction

algebraic formulation, global variables

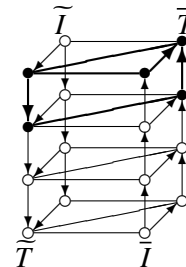
configuration variables
inner space orientation
 intervals instants
 dimensions: $[\Theta]$
 SI units: kelvin

source variables
outer space orientation
 instants intervals
 dimensions: $[ML^2T^{-3}]$
 SI units: watt



Symbol Nomenclature, SI units

- T_h thermodynamic temperature at the point \bar{p}_h , K
- G_α relative temperature associated with \tilde{l}_α , K
- R_h heat production rate in the dual cell \tilde{v}_h , J
- Q_α heat current crossing the dual cell \tilde{s}_α , J
- ρ_h mass density in the dual cell \tilde{v}_h , kg/m³
- c_h specific heat capacity in the dual cell \tilde{v}_h , J/(kg K)
- U_h internal energy of the dual cell \tilde{v}_h , J
- λ thermal conductivity, W/(m K)
- τ ,
- $g_{\alpha,k}$ incidence numbers edges-nodes of the primal
- $\tilde{d}_{h\alpha}$ incidence numbers volumes-faces of the dual



Ref:

TCf2-17; <http://discretephysics.dica.units.it> tutte le lettere sono nella listOfSymbols.tex