

▪ **Numerical simulation of flow and heat transfer**

Although not a field of application per se, it constitutes one of the main analysis tools of the systems and processes involved in the aforementioned research activities.

Typical activities in this area include :

- Transient flow phenomena in natural convection in cylindrical storage tanks, in the turbulent-, laminar- and transitional-flow regime
- Conjugate heat transfer simulations of in-ground rectangular tanks, coupling the hydrodynamic phenomena with ground heat transfer
- Natural convective flow and heat transfer in air inside trapezoidal enclosures, encountered in greenhouse-type solar stills, without or with the inclusion of vapor mass transfer (double-diffusive natural convection).
- Flow and heat transfer in evacuated tube solar collectors with air as the working fluid.