The research group acts basically on the application and development of numerical tools to computational fluid mechanical problems and the formation of human resources in numerical tools. Inside the last objective, we already have formed a lot of masters and scientific initiation students. Actually we already have the participation of p.h.d. students. In relationship of development and application of numerical methods to mechanical fluids problems and heat transfer and mass defined's in complex geometry's, we are working with the finite volume method and we are using to domain discretization generalized coordinates and non structured grids. Is a preoccupation of the group the development of techniques that can possibility the problem solution in relationship to processes of plastic injection, ambient pollution, natural convections in equipments and process of oil recuperation.