The seminar will be devoted first to present the notion of Gamma-convergence, introduced in the early seventies by De Giorgi and that in turn stems by the corresponding operator theory developed by Spagnolo to treat elliptic and parabolic PDE’s with highly oscillating coefficients. This is a variational convergence especially suited to deal with problems presenting an internal scale or indexed by a (real or fictitious) parameter arising from some geometric or constitutive aspects of the model. We will go through its main abstract properties underlining its capability to catch the asymptotic behaviour of families of minimum problems. Afterwards, depending also on the audience interest we will apply this theory to different issues as overall features of nonlinear composites (homogenization), problems with discontinuities in Computer Vision, passage from discrete systems to continuum theories and applications to models in Nonlinear Elasticity.