**Abstract:** In this talk the geometric approach to the virial theorem in Lagrangian formalism is presented in quasi-velocities, and a generalization of the virial theorem on Lie algebroids is given.
 The virial theorem was introduced by Clausius in statistical mechanics in 1870 and since then it became important in many other areas in physics. In the original formulation this theorem establishes a relationship between the time averages of the kinetic energy and of the scalar product of trajectory by force. In the particular case of a conservative system with homogeneous potential, this amounts to a relation between time averages of the kinetic and the potential energy. The modern approach to the virial theorem uses Hamiltonian formalism and establishes that, under the general conditions of application of the theorem, the time average of the Poisson bracket of an observable *G* with the Hamiltonian *H* vanishes, obtaining as a particular case that of a regular Lagrangian system. Virial-like theorems are available for systems with configuration space different from$ IR^{N}$. More concretely, the geometric version of the virial theorem on a Poisson manifold$ (M,\{.,.\})$ tell us that every smooth real function *H* on *M* defines a dynamical system by  $\dot{x}=X\_{H}\left(x\right)=\{x,H\}$, and if a function *G* remains bounded the time average of the Poisson bracket $\left\{G,H\right\} $vanishes, that is,$\left〈\left〈\left\{G,H\right\}\right〉\right〉=0$.