

## On some natural bi-invariant Lorentz-Finsler metrics

It is well known and easy to show that the linear symplectic group has no bi-invariant Riemannian or Finsler metric. However, it does have a natural bi-invariant Lorentz-Finsler metric, some of whose properties I will discuss in my talk. This Lorentz-Finsler metric extends to the group of contactomorphisms of any closed contact manifold and is related to systolic inequalities in the contact setting. I will discuss some of the features of this Lorentz-Finsler metric in the simple case of the group of orientation preserving diffeomorphisms of the circle. This talk is based on a joint work with Gabriele Benedetti and Leonid Polterovich.