## Geometry Seminar

## Distance functions on Cartan-Hadamard manifolds and their applications

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**Abstract**. In this talk, we will work with distance functions on Cartan-Hadamard manifolds. As an application, we will show how a Bochner type formula can be used to establish universal inequalities for the eigenvalues of the drifted Cheng-Yau operator on a bounded domain in a pinched Cartan-Hadamard manifold with the Dirichlet boundary condition.

## References

- Júlio C. M. da Fonseca, José N. V. Gomes, Eigenvalue estimates of the drifted Cheng-Yau operator on bounded domains in pinched Cartan-Hadamard manifolds, arXiv:2107.09135 [math.DG], 2021.
- [2] P. Petersen, Riemannian Geometry, Third Edition, Springer, Los Angeles, USA, 2016.