

# SEMINARY ON DYNAMICAL SYSTEMS

## Orientability of vector bundles over flag manifolds

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Miniauditório do MAT

**Abstract.** The goal of this lecture is to present necessary and sufficient conditions for the orientability of vector bundles over flag manifolds of a real semi-simple Lie group [1]. We consider two kinds of vector bundles, the tangent bundle of flag manifolds as well as the stable and unstable vector bundles of some gradient flows on flag manifolds. In these cases, orientability can be decided by looking at the root systems and Dynkin diagrams.

### Referências

- [1] Patrão, M.; San Martin, L.A.B.; Santos, L.; Seco, L. (2012). Orientability of vector bundles over real flag manifolds. *Topology and its Applications*, vol. 159, 2774–2786.