

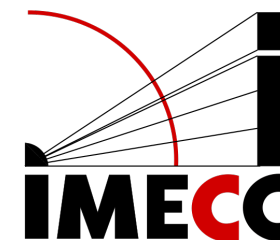


# V Workshop in Stochastic Analysis and Applications

IMECC - Unicamp

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## Solution Curve for Linear Control Systems on Lie Groups

### Abstract

This work explores the linear control system in Lie Groups. This control system is, in a natural way, an extension of its counterpart in Euclidean space. Our main purpose is to explicitly describe the solution for a linear control system on connected Lie groups, using an appropriate lift technique. When we equip a Lie group with an inner derivation, we obtain better results. Finally, we present some aspects of controllability for linear control systems. This is a joint work with Alexandre José Santana and João Paulo de Oliveira.