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Lie group with dilations

[1]

Definition. Lie group with dilations

A **Lie group with dilations** is a simply connected Lie group whose Lie algebra is equipped with dilations

$$\{D_r|r \in (0,\infty)\} \subset \operatorname{EndLiealg}_{\mathbb{R}}(\operatorname{Lie}(G))$$

where

$$D_r = \exp(A \ln r)$$

where $A \in \operatorname{EndVec}_{\mathbb{R}}(\operatorname{Lie}(G))$ is a diagonalizable linear map with *positive* eigenvalues. The eigenvalues of A are **weights of dilations**.

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1. link.springer.com/content/pdf/10.1007/978-3-319-29558-9_3 ↩