

Chapter 1

Lie Groups

1.1 Haar measure

Integration on G G has left-invariant measure μ , i.e., $\mu(U) = \mu(gU)$, where $g \in G$ and $U \subseteq G$.

Example 1.1.1. *Lebesgue measure on $G = \mathbb{R}^n$.*

Theorem 1. *Any locally compact group has Haar measure (left invariant).*