Gruppo	Dimensione (reale)	Connesso / CpA	Compatto	π_1 (in 1_G)
$GL(n,\mathbb{R})$	n^2	✗ (2)	✗ (aperto)	$\pi_1(SO(n))$
$GL(n,\mathbb{C})$	$2n^2$	✓	✗ (aperto)	$\mathbb{Z} \times \pi_1(SU(n))$
$O(n)$	$\binom{n}{2}$	✗ (2)	✓ ($\|A\| = \sqrt{n}$)	$\mathbb{Z}_2$
$SO(n)$	$\binom{n}{2}$	✓	✓	$\begin{cases} \{1\} \\ \mathbb{Z} \\ \mathbb{Z}_2 \quad \forall n \geq 3 \end{cases}$
$O(p,q)$	$\binom{p+q}{2}$	✗ (4)	✗ (cosh)	$\pi_1(O(p)) \times \pi_1(O(q))$
$SO(p,q)$	$\binom{p+q}{2}$	✗ (2)	✗ (cosh)	$\pi_1(SO(p)) \times \pi_1(SO(q))$
$U(n)$	n^2	✓	✓	$\{1\}$
$SU(n)$	$n^2 - 1$	✓	✓	$\{1\}$
$SL(n,\mathbb{R})$	$n^2 - 1$	✓ [1]	✗ $\left(\begin{smallmatrix} 1/\epsilon & 0 \\ 0 & \epsilon \end{smallmatrix} \right)$	$\pi_1(SO(n))$
$SL(n,\mathbb{C})$	$2n^2 - 1$	✓	✗ $\left(\begin{smallmatrix} 1/\epsilon & 0 \\ 0 & \epsilon \end{smallmatrix} \right)$	$\{1\}$
$Sp(2n,\mathbb{R})$	$n(2n+1)$	✓	✗	$\mathbb{Z}$