

Quotient Algebras of $su(N)$ and Their Applications

Zheng Yao Su

National Center for High-Performance Computing

Quotient algebras are an algebraic structure residing in unitary Lie algebras in general. In a nutshell, a quotient algebra is a partition over a given unitary Lie algebra where each partitioned subspace is abelian and these subspaces enjoy the feature of closure under an addition-like operation. With such partitions, treatments of some QST problems in high-dimensional systems become feasible or easier. Certain applications of the treatments will be briefly outlined.